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ANNUAL ADDRESS

with S. Hoernle's  
Commentary

DELIVERED TO THE

# ASIATIC SOCIETY OF BENGAL

BY

A. F. RUDOLF HOERNLE, Ph.D., C.I.E.

PRESIDENT OF THE SOCIETY

1897-1898.

*Calcutta, 2nd February, 1898.*

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CALCUTTA:

BAPTIST MISSION PRESS.

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## ANNUAL ADDRESS, 1898.

GENTLEMEN,

I now rise to deliver the usual annual address. I confess that when you did me the honour, last year, of nominating me to the post of President of your Society, it was the prospect that I should have to deliver such an address which made me hesitate before I accepted your honouring proposal. Looking over the annual addresses delivered within the last ten years, I notice that they have been gradually growing to very large dimensions. The last two addresses occupy respectively, in print, 154 and 170 of the pages of our Proceedings. The thought that possibly it might be expected of me to "break this record" caused me many misgivings, because I felt that I lacked both the ability and the leisure to do so. Indeed I felt rather inclined at one time to initiate a new departure by returning to the previous long-prevailing custom of the President making only a few brief observations on the past year's proceedings of the Society. But my courage failed me; I felt I must leave it to some one of greater weight than myself to make the change; but I cannot help thinking that a return to the old practice would be wise in the interests of the Society. At this, the busiest time of the year, there should be no stumbling-block put in the way of those whom we desire to take upon themselves the responsible post of President of our Society.

There are two preliminary remarks which I wish to make. One refers to the Report of the Council which has just been read. You will have observed that we close our accounts with a deficit of Rs. 3,417-1-2. This is a rather serious matter, considering that the regular condition

of our finances is that our income just about balances our expenditure. The deficit has been due to two co-operating causes : a decrease in our receipts and an increase in our expenditure. The main cause of the former is the reduction of Rs. 744 under the head of subscriptions from members. Only sixteen new members joined the Society during the past year. It seems to me a cause of much regret that the Society does not receive as much support as it deserves, especially from some of the scientific departments. I would earnestly impress upon our members the necessity of increasing the resources of the Society by inducing larger accessions to our numbers. The main cause of the increase in our expenditure has been the extraordinary cost of publishing our Journal Parts I. and II. In Part I. eight numbers (including Extras) have been issued instead of the usual four, and in Part II. one number, an important one, was unusually large. From one point of view, of course, this activity is very satisfactory ; but it caused the budget allowance to be exceeded by nearly Rs. 3,000. I trust that our Secretaries, who so ably edit our Journals, will see the necessity of endeavouring in the ensuing year to keep within the limits of their allowances. There is a very special reason for the practice of economy. In company with the rest of Calcutta our Society suffered heavily in the late earthquake. Our premises were severely damaged, and we had to incur a heavy bill for repairs done by Messrs. Macintosh Burn & Co. This bill, amounting to upwards of Rs. 5,500, will have to be paid in the course of the year, and a strong effort must be made to meet it without crippling the resources of the Society. As one means of doing so I would suggest the advisability of selling some of our oil-paintings. There are among them, I understand, a few of considerable value, one, for example, of a rural scene by the younger Morland. Such a disposal of them, I venture to think, would be not only in the interests of the Society, but also of the pictures themselves, the proper preservation of which, in the Calcutta climate, is a matter of great difficulty.

The other point concerns a duty which it gives me very great pleasure to discharge. It is to remind you of the valuable services of our officers given by them to the Society voluntarily and at the sacrifice of their private time and leisure. Mr. C. R. Wilson was our General Secretary till the middle of April, when he was succeeded first by Dr. A. R. S. Anderson and afterwards by Dr. A. W. Alcock. Dr. Ranking acted as our Philological Secretary till June, when he left Calcutta on leave, and Dr. Bloch was appointed. Mahāmahopādhyaya Hara Prasād Shāstri carried on the duties of Joint-Philological Secretary throughout the year ; so did Mr. F. Finn and Mr. L. de Nicéville those

of Natural History Secretary and Anthropological Secretary respectively. Mr. C. Little continued our Treasurer for another year with conspicuous zeal. To all these gentlemen I desire to offer my warm acknowledgments for the help afforded me in presiding over the affairs of the Society, and I would also ask you to pass a cordial vote of thanks for their services to the Society during the past year.

In thinking over what I should make the subject of my annual address to you, it has occurred to me that perhaps I might be able to say something that would interest you and at the same time not take up too much of your time, if I were to confine myself to those departments of research in which I have been to some extent a worker myself, and to review the period from 1883 up to this year. I have chosen this period, both because it is characterised by special progress in those departments, and because the preceding period of one hundred years was reviewed by me in 1883 in the Centenary Review. The departments I refer to are those of the History and Literature of Jainism and Buddhism, and of Indian Archæology and Epigraphy. To these I will add some account of the recent Ethnographic and Linguistic Surveys, as well as of the History of Old Calcutta.

**Jainism and Buddhism.**—A very great advance, during the period under review, has been made with respect to our knowledge of JAINISM. Jainism is the great Indian rival of Buddhism, and is as ancient an institution as the latter, though until quite recent years its very existence before the middle ages was denied by the learned world, and even at the present time, by the side of the world-wide fame of its illustrious rival, it is hardly more than a name to the general public. It owes in the main its rehabilitation as one of the most ancient monastic organizations of India to the researches of Professor Jacobi, which were seconded by Hofrath Prof. Bühler, myself, and others.<sup>1</sup> The results of these may be thus summarised.

The founder of Jainism is commonly known by the title of Mahāvīra, under which he is usually referred to in the sacred books of the Jains. His personal name, however, was Vardhamāna. In the books of the rival Order of the Buddhists, he is designated the Nātaputta, i.e., "the son of the chief of the Nāta clan of Kṣatriyas." For like Buddha, Mahāvīra was of high aristocratic descent, the son

<sup>1</sup> For detailed information see Prof. Jacobi's Translations of the *Ācārāṅga* and *Kalpa Sūtras* (1884), and the *Uttarādhyayana* and *Sūtrakṛtāṅga Sūtras* (1895), Prof. Bühler's *Indian Sect of the Jains* (1887), and my own Translation of the *Upāsakadaṇḍa Sūtra* (1888); also Prof. Jacobi's *Kalpa Sūtra*, published in 1879, and a paper of his on the *Origin of the Āvētāmbara and Digāmbara Sects* in the *Journal of the German Oriental Society*, Vol. XXXVIII, 1884.

of a Rājā or petty king. His father Siddhārtha was the head of a Kṣatriya clan, the so-called Nātas or Nāyas, who were settled in the suburb Kollāga of the once flourishing town of Vaiçālī, whence it is that Mahāvira is occasionally designated the Vēsāliya or "the man of Vaiçālī." Vaiçālī is the modern Bēsārḥ, about 27 miles north of Patna. Anciently it consisted of three distinct portions, called Vaiçālī, Kuṇḍagāma and Vāṇiyagāma, and forming, in the main, the quarters inhabited by the Brāhman, Kṣatriya and Baniyā castes respectively. At the present day it has entirely disappeared, but the sites of its three component parts are still marked by the villages of Bēsārḥ, Basukuṇḍ and Baniyā. While it existed, it had a curious political constitution; it was an oligarchic republic; its government was vested in a Senate, composed of the heads of the resident Kṣatriya clans, and presided over by an officer who had the title of King and was assisted by a Viceroy and a Commander-in-Chief. Siddhārtha was married to Triçalā, who was a daughter of Cētāka, the then governing King of the republic. From her Mahāvira was born in or about 599 B. C., and he was, therefore, a very highly connected personage. This accounts for the fact that, like his rival Buddha, in the earlier years of his ministry, he addressed himself chiefly to the members of the aristocracy and to his fellow castemen, the Kṣatriyas. He married, and his wife Yaçodā bore him a daughter Anojjā who was married to Jamālī, a fellow nobleman and, later on, one of his followers. He seems to have lived in the parental house, till his father died, and his elder brother Nandivardhana succeeded to what principality they owned. Then at the age of thirty, he, with the consent of the head of his house, entered the spiritual career, which in India, just as in Europe, offered a field for the ambition of younger sons. In Kollāga, the Nāya clan kept up a religious establishment, doubtless similar to those still existing in the present day. There is one, near Calcutta, in the Maniktola suburb, which is probably known to most of us. Such establishments consist of a park or garden, enclosing a temple and rows of cells for the accommodation of monks, sometimes also a stūpa or sepulchral monument. The whole complex is not unusually called a Caitya, though this is strictly only the name of the shrine within it. The Caitya of the Nāya clan was called Duipalāsa, and it was kept up for the accommodation of the monks of Pārçvanātha's order, to whom the Nāya clan professed allegiance.

Mahāvira, on adopting the monk's vocation, would naturally retire to the Duipalāsa Caitya and join the Order of Pārçvanātha. But the observances of that order do not seem to have satisfied his notions of stringency, one of the cardinal points of which was absolute nudity.



So after a trial of one year, he separated, and discarding his clothes, wandered about the country of North and South Bihār, even as far as modern Rājmahal. Considering his tenet of absolute nudity, it is no wonder that it took twelve years before he succeeded in gaining a following that acknowledged his divine mission. It was now that he obtained the title of Mahāvira or 'Great Hero,' and was acknowledged to be a Jina and Kēvalin, *i.e.*, a holy and omniscient person. It is his title of Jina or 'Spiritual Conqueror,' from which the names Jainism and Jain, by which his system and his sect are now generally known, are derived; and it is Mahāvira's initial connection with Pārçvanātha's order which accounts for the fact that the latter saint is reckoned in the Jain hierarchy as the immediate predecessor of Mahāvira, and that his image is set up in so many Jain temples. The famous sacred hill of Pārçvanātha (or Paresnāth, as it is commonly called) with its Jain temples also takes its name from him. The last thirty years of his life Mahāvira passed in teaching his religious system and organising his order of ascetics, which was patronised chiefly by those princes with whom he was related through his mother, the kings of Vidēha, Magadha and Aṅga, *i.e.*, those of North and South Bihār. In the towns and villages which lay in these parts he spent almost the whole period of his ministry, though he extended his travels as far north as Çrāvastī, near the Nepalese frontier, and perhaps as far south as the Paresnāth hill. The area of his ministry, therefore, practically coincides with that of his great contemporary Buddha. His life on the whole, was an uneventful one. With Buddha, who, as we now see, was his most formidable rival, he does not appear to have come into any prominent conflict. The Jain sacred books hardly notice him. On the other hand, they tell us of a fierce hostility between Mahāvira and another great spiritual chief of those days. This was Gōsāla, the son of a Mankhali or beggar, who had set up as the head of a section of the Ājivika order of monks, an order which at that time and for some subsequent centuries was so important as to be mentioned in one of Aśōka's pillar edicts about 234 B.C., but which has long since ceased to exist. This Gōsāla appears to have been the first who attached himself to Mahāvira when the latter commenced his naked peregrinations. But after following Mahāvira for six years, he quarrelled with his master, and set up as a chief of ascetics himself, and that, two years earlier than Mahāvira himself ventured to do. This conduct naturally enough explains the intense hostility of Mahāvira, who resented the presumption of his former disciple in taking precedence of his master.<sup>2</sup> Besides Gōsāla, the apostate, Mahāvira had

<sup>2</sup> I should mention that Prof. Jacobi holds a slightly different view of Gōsāla's position. According to him Gōsāla and Mahāvira were two independent sect

eleven chief disciples, who all remained true to him, and who are said to have, between them, instructed 4,200 Ġramaṇas or monks; but only one of them, named Sudharman, survived his master, and it is through him that Jainism has been continued to the present day. Mahāvira died in the seventy-second year of his life, in the small town of Pāvā, in the Patna district, which is still considered one of the most sacred spots by the Jains. The traditional dates of his birth and death are 599 B.C. and 527 B.C. As modern research has shown they cannot be far wrong. The corresponding dates for Buddha, who lived to the age of eighty, are 557 and 477 B.C. It is certain that the two men were contemporaries, and that Mahāvira died some years before Buddha. The former, like his great contemporary, must have been an eminently impressive personality. This accounts for his great success as a sect founder. He certainly succeeded in eventually bringing over to his way of thinking the whole order of Pārçvanātha, so that the name of Nirgrantha or "one without any ties," which originally belonged to that order, attached itself to the order of Mahāvira. The only essential point of difference between them was the question of wearing a modicum of clothes. The followers of Pārçvanātha appear to have yielded that point for a time. The difference, however, being one on a point of the merest decency, necessarily continued to subsist in a dormant state, till a few centuries later it woke up again and, as we shall see further on, led to the great division of the Jain order into the Ġvēlāmbaras and Digambaras or the 'White-clothed' and 'Unclothed ones.' The term Nirgrantha or Nigantha, indeed, was the name by which the Jains were originally known. They are mentioned under that name in the same pillar edict of Açōka, about 234 B. C., which, as I have already remarked, also names the Ġjivika monks; and it remained their name for many centuries afterwards, for Hiuen Tsiang, in the seventh century A.D., still knows them under no other name. How it came to fall into disuse, and to give place to the comparatively modern name Jain has not yet been explained.

I will notice, in passing, the coincidence between Christ and Mahāvira with respect to the number twelve of their disciples which in either case includes an apostate. An interdependence of Christianity and Jainism, I believe, has never been seriously propounded, as has been done in the case of Buddhism with respect to similar coincidences. Such coincidences are apt to be urged too far; and

founders, who only associated for six years with the intention of combining their sects and fusing them into one; but that at last they quarrelled, probably on the question who was to be the leader of the united sect; and thus their bitter hostility is accounted for.

the instance I have noted is an instructive one in that respect: isolated coincidences possess very little evidential force.<sup>3</sup> With regard to Buddhism and Jainism there are numerous coincidences in smaller details between the lives and doctrines of Buddha and Mahāvira; and this circumstance was long considered a good reason for discrediting the story of the latter and of the early existence of the Jain sect. But the sketch of Mahāvira's life which I have given above shows that in the main it was entirely different from Buddha's.

Before touching on the alleged doctrinal and ceremonial coincidences, it may be well to point out that neither Buddhism nor Jainism are religions in the strict sense of that word. They are rather monastic organizations. They are orders of begging fraternities, in many respects similar to the Dominicans and Franciscans among ourselves. Both were founded at the end of the sixth and beginning of the fifth centuries B.C. That period was a very active one in Northern India with respect to religious matters. The times were rife with religious movements. Many monastic orders sprung up: Buddhism and Jainism were only two among them, though they were the most important and most enduring. A third contemporary order, that of the Ājīvikas, which only enjoyed a transitory existence, has been already mentioned by me incidentally. It must not be thought, however, that the institution of monasticism was any innovation on the existing religious conditions of the country. That institute formed an essential part of the original Brahmanism. The old Brahmanic religion ordained man's life to be spent in four consecutive stages, called Āśramas. A man was to commence life as a religious student, then to proceed to be a householder, next to go into retirement as an anchorite, and finally to spend the declining years of his life as a wandering Sanyāsin or mendicant. These Sanyāsins or Brahmanic mendicants form the prototype of the great monastic orders that arose in the sixth century B.C., the only difference apparently being that the Brahmanic mendicants never formed themselves into such large organisations as the Buddhists and Jains. The rules and observances which were prescribed for the former were either adopted or imitated by the latter. It is this circumstance which explains most of the coincidences that have been noticed between the Buddhists and Jains: they followed the same model. Thus to mention but one striking example, the rule of *ahimsā* or 'respect for life' which forms such a prominent feature in Buddhism and even more so in Jainism, is one which was binding on all Brahmanic mendicants. In course of time a tendency arose in Brahmanism to limit the entry into the stage

<sup>3</sup> For another curious coincidence, relating to the parable of the Three Merchants, see Jacobi's Translation of the Uttarādhyayana Sūtra, p. 29.

of a mendicant to persons of the Brahman caste. It is probably this circumstance which first led to the formation of non-brahmanic orders such as those of the Buddhists and Jains, which were chiefly and originally intended for persons of the second or Kṣatriya caste, though eventually other caste-men were also admitted. It is easy to understand that these non-brahmanic orders would not be looked upon by the Sanyāsins as quite their equals, even when they were quite as orthodox as themselves, and on the other hand that this treatment by the Brahmanic ascetics would beget in their rivals a tendency to dissent and even to opposition. Thus the Buddhists and Jains were not only led to discard the performance of religious ceremonies which was also done by the Brahmanic mendicants, but to go further and even discontinue the reading of the Vēdas. It was this latter practice which really forced them outside the pale of Brahmanism. The still very prevalent notion that Buddhism and Jainism were reformatory movements, and that, more especially, they represented a revolt against the tyranny of caste, is quite erroneous. They were only a protest against the caste exclusiveness of the Brahmanic ascetics; but caste as such, and as existing outside their orders, was fully acknowledged by them. Even inside their orders, admission, though professedly open to all, was practically limited to the higher castes. It is also significant for the attitude of these orders to the Brahmanic institutions of the country, that though in spiritual matters their so-called lay-adherents were bound to their guidance, yet with regard to ceremonies, such as those of birth, marriage and death, they had to look for service to their old Brahmanic priests. The Buddhist or Jain monk functionated as the spiritual director to their respective lay communities, but the Brahmans were their priests.

It will thus be seen that the points of resemblance, undoubtedly existing between the orders of the Buddhists and Jains, are the natural result of the surrounding conditions under which they both arose and lived. Their points of difference are numerous, both in regard to doctrine and practice. They are so many, and often so minute and technical, that it would be difficult for me to render them intelligible within a small compass; nor would such an exposition be of any general interest. Those whom it may interest, will find the subject fully and ably discussed by Professor Jacobi in the Introductions to his Translations (see footnote, on p. 3). I may mention, however, two points which I believe have not been elsewhere noticed, but which, to my mind, very clearly bring out the extreme difference in the character and practice of the two orders. There is a celebrated term common to both the Buddhists and Jains: the term *tri-ratna* or "the three jewels." With the former

these are Buddha, the Law and the Order; but with the latter they are Right faith, Right cognition, and Right conduct. These mottoes, as we might call them, of the two orders are significant. That of the Buddhists refers to concrete, that of the Jains to abstract things. The former shows that Buddhism was animated by a practical and active spirit, while the latter shows Jainism to have been speculative and uninteresting. The history of the two orders proves this inference. While Buddhism, with its active missionary spirit, spread far and wide beyond the borders of India, and outgrowing the narrow bounds of a mere monastic order developed into popular religions in Ceylon, Burma, Tibet and other lands, Jainism always lived a quiet, unobtrusive life within the borders of India, travelling but little, if at all, beyond them. Again, the term applied collectively to the order both by the Buddhists and Jains was *sangha* or "the Order." But the Jains qualified it by the addition of the further term *caturvidha* or "four-fold." With them the monastic order included four classes of persons: monks, nuns, lay-brothers and lay-sisters. With the Buddhists the order included only two classes: monks and nuns; their lay-adherents stood in no essential or organic connection with them. It is obvious that no order of mendicant monks could possibly maintain its existence without some sort of relation to the surrounding secular community. It must of necessity depend for its sustenance and support on those within that community who, out of reverence for the Order, supported it with their alms. But the two orders observed a very different policy towards their respective lay-adherents. With the Buddhists they had no part and parcel in the monastic organization. They were not formally admitted into communion with the order, they had not to take any vows, there were no rules to regulate their position or conduct, no regular devotional services were held for them, neither was there any formal exclusion of any unworthy lay-person; in fact, the position of the lay-adherents was so loose and informal that a lay-adherent of the Buddhist order might at the same time be also an adherent of another order; there were no rules prohibiting such an anomalous position. The proud feeling of being a member of Buddha's great order and partaking of its spiritual benefits was not permitted to the Buddhist lay-adherent. Very different was the case of the Jain lay-adherent. His position was exactly the reverse in all the points just enumerated. He formed an integral part of the organization, and thus was made to feel that his interests were bound up with those of his order. In this matter Buddhism made a fatal mistake; for their treatment of their lay-adherents was one of the main causes of the eventual total disappearance of their order from

India, the land of their home. When in the course of time, in consequence of the change of religious tendencies which already began to operate in the seventh century A.D., at the time of the celebrated Chinese Buddhist pilgrim, Hinen Tsiang, the recruitment of their order declined; and when, later on, the pressure of the spiritual opposition of the great Brahmanic orders, founded in the ninth century A.D. by Çaṅkarācārya and his disciples, increased; and when finally, in the twelfth and thirteenth centuries A.D., the storm of the iconoclastic Muhammadan conquest swept over India, and, as related in the histories of Tārānāth and Minhājū-d-dīn, inflicted wholesale massacre on the few still surviving monastic settlements, Buddhism simply collapsed; it utterly disappeared. Having maintained no inseparable bond with the broad strata of the secular life of the people, it had no chance of recruitment, it could neither maintain, nor recover itself. The lay-followers of Buddhism, having lost their monks to whom no paramount interest bound them, by a most natural process relapsed into Brahmanism, in which they again found, as they had done before the advent of Buddhism, not only their priests, but also their spiritual directors. Some small portions only of the former Buddhist laity, here and there, especially in Bengal, preferred to keep aloof, maintaining a caricatured form of Buddhism without Buddha and his Order, in which it is only with great difficulty that one can recognize the distorted traces of the once flourishing system of Buddha. The discovery of these caricatured survivals of Buddhism in Bengal is mainly due to the researches of our Joint-Philological Secretary, Pandit Hara Prasād Shāstri, who has unearthed them as it were in the followers of Dharma, one of the well-known units of the Buddhist Trinity, and published an account of them in the *Journal of our Society* for 1895. From them Dharmtolla Street takes its name, and their Dharma temple still stands in the modern Jaun Bazar Street.

Very different was the fate of Jainism which securely lived through the stormy times that shattered Buddhism. It has maintained itself quietly and unobtrusively to the present day; and its prospering monastic settlements and lay-communities are still to be found in Western and Southern India and Bengal; one of them we have close to our own doors, in the Maniktola suburb of this city. Jainism, indeed, is the only one of the almost primeval monastic orders of India which has survived down to the present day. But the history of an order of such a retiring character can necessarily offer but few points of general interest. There is really only one event in it which in its results obtrudes itself on the notice of the outside world. This is the great schism, which has been already alluded to, into the two divisions

of the *Çvētāmbaras* and *Digambaras*, the 'White-clothed' and the 'Unclothed' monks. The division took place, as indicated by the name, on the question of wearing clothes, though there are also other differences both in point of doctrine and practice, which, however, are of no general interest. The two divisions maintain an entirely separate and even antagonistic existence; they possess also almost entirely distinct literatures, and the most ancient class of sacred books, the so-called *Angas* and *Pūrvas*, have been preserved only in the *Çvētāmbara* division. Moreover both divisions are now divided into an extensive ramification of schools and lines of teachers, which gradually grew up in the course of centuries. The historical, or rather chronicling, spirit is as strongly developed in the Jains as it is in the Buddhists. They keep up regular *Paṭṭāvalis* or lists of the succession of teachers, several of which have been published by Hofrath Prof. Bühler, Dr. Klatt and myself in the *Indian Antiquary* and the *Epigraphia Indica*; and their sacred and other books are throughout interspersed with an abundance of chronicling notices, which have been extracted and recorded, in addition to the scholars already mentioned, by Professors Weber and Bhandarkar.\* From all these materials the Jain tradition regarding their Order and their Sacred Books may be gathered. In its main features it is as follows.

In the second century after Mahāvīra's death (about 310 B.C.) a very severe famine, lasting twelve years, took place in the country of Magadha, the modern Bihār, beyond which, as yet, the Jain order does not seem to have spread. At that time Candra Gupta, of the Maurya dynasty, was king of the country, and Bhadrabāhu was the head of the still undivided Jain community. Under the pressure of the famine, Bhadrabāhu with a portion of his people emigrated into the *Karṇāṭa* (or Canarese) country in the south of India. Over the other portion that remained in Magadha, Sthūlabhadra assumed the headship. Towards the end of the famine, during the absence of Bhadrabāhu, a Council assembled at *Paṭaliputra*, the modern Patna; and this Council collected the Jain sacred books, consisting of the eleven *Angas* and the fourteen *Pūrvas*, which latter are collectively called the twelfth *Anga*. The troubles that arose during the period of famine produced also a change in the practice of the Jains. The rule regarding the dress of the monks had been, that they should ordinarily go altogether naked, though the wearing of certain clothes appears to have been allowed to the weaker members of the order. Those monks that remained behind felt con-

\* See Prof. Weber's Catalogue of the Jain Manuscripts in Berlin, 1888 and 1892; also Prof. Bhandarkar's Report on the Search for Sanskrit MSS., 1883-84. For a fuller list, see Prof. Jacobi's Introduction to his Translation of *Jaina Sūtras*, Part II.

strained by the exigencies of the time to abandon the rule of nakedness, and to adopt the "white" dress. On the other hand, those who out of religious zeal chose to exile themselves rather than admit a change of the rule of nakedness, made that rule compulsory on all the members of their portion of the order. When on the restitution of peace and plenty, the exiles returned to their country, the divergence of practice, which had in the meantime fully established itself between the two parties, made itself too markedly felt to be overlooked. The returned exiles refused to hold fellowship any longer with the (in their opinion) peccant portion that had remained at home. Thus the foundation was laid of the division between the two sections of the Digambaras or naked ones and Āvētāmbaras or white-clothed ones. As a consequence of this difference, the Digambaras refused to acknowledge the collection of Sacred Books made by the Council of Pāṭaliputra; and they, therefore, declare that, for them, the Pūrvas and Aṅgas are lost. The difference, however, did not at once result in a definite schism: to this it does not appear to have come till a few centuries later, when the final separation took place in the year 79 or 82 A.D. On this point both sections are practically unanimous, their dates only differing by three years. At this time the Jain order had already spread far beyond the borders of its narrow home in Bihār, and ramified into numerous schools and subdivisions, some of which (as we shall presently see) possessed already flourishing settlements in Mathurā. It would seem that this spirit of expansion developed in the order principally in the time of Suhastin, who was the head of the Āvētāmbara section towards the end of the third century B.C.; for it is just under him that the Paṭṭāvalis record an extraordinarily large number of divisions and subdivisions. It is certain that about the middle of the second century B.C. the Jain order had spread as far as the Southern part of Orissa; for the Jains are referred to in Khāravela's inscription on the Kharṇagiri rock, near Cuttack.

In the course of time the collection of sacred books, or Siddhānta as it is called by the Jains, which the Council of Pāṭaliputra had established, fell more or less into disorder. It even was in danger of becoming extinct, owing to the scarcity of manuscripts. It became, therefore, necessary to reduce it to order, and to fix it in an authorised edition of manuscript "books." This was done at a Council held in Vallabhi in Gujarat, under the presidency of Dēvarādhi, the head of one of the principal schools.

It is clear from this tradition that the collection of the Jain sacred books, as preserved by the Āvētāmbara section of the community, goes back to the end of the fourth or the beginning of the third century



before the Christian era; for the Council of Pāṭaliputra which made the collection must have taken place about 300 B.C. The very process of a collection points to the fact of a previous existence; and the tradition of the Jains maintains that the Pūrvas, one of the two main divisions of the collection, were taught by Mahāvira himself to his immediate disciples, the so-called Gaṇadhara, and the latter composed the Aṅgas, the other main division. The name Pūrvā means an 'earlier' composition; and the Pūrvas were evidently called so because they existed prior to the Aṅgas. At the time of the Council of Pāṭaliputra a large portion of them, as the Jains themselves admit, had been already lost; and what still remained was then embodied in a twelfth Aṅga. The Jain traditions about these Pūrvas clearly point to the fact that there was once an original set of sacred books, the remains of which were, by the Pāṭaliputra Council, re-cast and collected in a new form, better adapted to the changed circumstances of the time.

Such is the tradition of the Jaina order with respect to its history and its sacred books. Until some thirty years ago, the prevalent disposition was to treat this tradition with great distrust. The presence of the strongly developed and curiously exact chronicling spirit, however, which I have already remarked on, as manifest throughout most of the literature of the Jains, lends but little support to that attitude; and this fact has been increasingly realised through the more intimate acquaintance with Jain literature which has been gained, during the period under review, through the publication of Jain books made by Professors Jacobi, Leumann, myself and others. Professor Jacobi, by a careful examination of the language and style of the Jain sacred books, which showed their very archaic character, contributed not a little to this result. Still so long as no independent and incontrovertible evidence could be brought forward in corroboration of the statements of the Jain tradition, no full conviction of the general reliability of it could be hoped for. The discovery of such independent corroborative evidence is the most striking feature of the period I am reviewing and is entirely due to the acumen of Hofrath Prof. Bühler of Vienna.<sup>5</sup> On making a re-examination of certain inscriptions, found in 1871 by the late Major-General Sir A. Cunningham in the ruins of the Kaṅkhālī mound in Mathurā,<sup>6</sup> Hofrath Bühler discovered among them some which made mention of several teachers and subdivisions of the Jains. Accordingly he arranged with Dr. J. Burgess, who was at that

<sup>5</sup> His researches on this subject are contained in a series of papers published in the volumes of the *Vienna Oriental Journal* for 1887 to 1891 and 1896, and in the *Transactions of the Imperial Academy of Sciences in Vienna* for 1897.

<sup>6</sup> See his *Survey Reports*, Vol. II.

time at the head of the Archæological Department, to make a thorough excavation of that mound. The work of excavation was carried out, under the superintendence of Dr. Führer, during the working seasons of 1889 to 1893, and again in 1896. An abundant yield of fresh inscriptions was obtained, impressions of all of which were sent to Hof-rath Buhler. By him they were carefully examined, and a selection of the most valuable published, with facsimiles, in the *Vienna Oriental Journal*, as well as in the two first volumes of the *Epigraphia Indica*. What makes these inscriptions particularly valuable is the fact that many of them are dated in years of the Indo-Scythian era, that is, the era which was used by the Indo-Scythian kings Kanishka, Huvishka and Vasudēva. These kings flourished in the two first centuries of the Christian era, and their empire included North-Western India, as far down as Mathurā. The dates of the inscriptions range from the 5th to 98th year of that era, and are, according to the usually accepted interpretation, equivalent to A.D. 83-176. Accordingly they prove the existence of the Jain order in Mathurā at an as early a date as the first and second centuries of our era. Most of these inscriptions were found engraved on the pedestals of Jain statues, and recorded the dedication of these statues to some Jain temple by Jain laymen or laywomen under the direction of some Jain monk or nun, whose spiritual pedigree is carefully recorded. These dedications furnish corroborative evidence on many points of great interest.

In the first place, the divisions and subdivisions of the order to which the directing monk or nun are recorded to have belonged, strikingly agree with those the existence of which in the first and second centuries of our era are also recorded in the *Kalpasūtra* and other books of the Jains. One of the *Gaṇas* or divisions which is most frequently mentioned is the *Kauṭika*, which was founded by Susthita, who was at the head of the order in the first half of the second century B.C. Moreover this division belonged to the *Çvētāmbara* section of the Jains. Thus we have here not only indirect evidence of the existence of the *Çvētāmbara* Jains in the middle of the second century before Christ, but also direct evidence of the spread of the *Kauṭika* division, in the first and second centuries A.D., as far as Mathurā, where, to judge from the frequent mention of their name in the inscriptions, they had a numerous and prosperous settlement. At that period there was also a Jain settlement in Bulandshahar, for the inscriptions also mention monks of a subdivision called after *Uccanagara*, or *Varaṇa*, both of which anciently were names of that town.

In the second place, the inscriptions prove the existence of Jain nuns as a regular part of the order; and they also show that these

nuns were very active in the interest of their faith, especially among the female members of the lay community, since in all cases, except one, lay-women dedicated images at the request of nuns. This fully agrees with the statements of the Jain scriptures. Moreover it affords an additional proof of the very early split of the order into the two sections of the *Çvētāmbaras* and *Digambaras*. For the latter do not admit nuns into the order; only the *Çvētāmbaras* do so. The inscriptions, therefore, prove that the Mathurā settlement was one of the *Çvētāmbara* section, and that the split of the order was already fully established in the first century of our era.

Another point clearly brought out by the inscriptions is the position of the lay element in the Jain community. I have already remarked that that element formed an integral part of the Jain organization, and shown the very important bearing of this point on the fortunes of the Jain order. The inscriptions apply to the laymen and laywomen the terms *Çrāvaka* and *Çrāvikā* respectively,—terms which have survived to the present day in the form of *Sārāogī* by which the Jain laity are often known. Among the Buddhists the term *Çrāvaka* is also used, but there it signifies an *Arhat*, that is a monk of a particular degree of sanctity. This circumstance not only marks the position of the lay element within the Jain order, but also brings out clearly an essential difference between the two great orders of Jains and Buddhists.

Again another point worthy of notice is that the inscriptions often mention the caste of Jain lay-people. I have already remarked how erroneous the idea is that Jainism or Buddhism intended to subvert the caste system. A lay convert to Jainism does not loose his caste by his conversion. He may have to give up the exercise of the trade of his caste, but if he wants a wife for himself or his son, or a husband for his daughter, he can only get them from his old caste. Thus one inscription records a donation by a layman of the *lohār* or smith's caste. He cannot have been a smith after his conversion, because Jainism forbids that trade to a layman. The reference, therefore, must be to the caste to which he or his ancestors belonged. It appears, however, from the inscriptions that even then, as in our days, most of the lay people belonged to the mercantile rather than the artificing classes.

I might mention many more points of detail in which the inscriptions discovered in Mathurā corroborate the statements of the Jain books; but I must refer those who may be interested in the subject, for further information to the papers themselves of Hofrath Prof. Bühler. There is one point, however, which I must not pass over. There is hardly another thing which has hitherto been considered a more characteristic external mark of Buddhism than the well-known Wheel and Stūpa

and their accessories. The late Pandit Bhagwanlal Indraji was the first to point out in 1883, in a paper on the Hathigumpha inscription, read before the Sixth International Congress of Orientalists at Leyden, that the Jains worshipped stūpas. But Hofrath Prof. Bühler's investigations have now fully proved that the hitherto accepted opinion about the Wheel and Stūpa must henceforth be relegated to the limbo of popular errors. The remnants of a Jain stūpa have been discovered at Mathurā. Indeed under the influence of the old error, it was at first thought that it must be Buddhist; but when ruins of two Jain temples were found in the closest proximity and all the other numerous evidences of Jainism, such as inscriptions and images of Jain saints, came to light, the true character of the stūpa as a Jain monument could no longer be doubted. This discovery has been confirmed by the discovery of sculptured slabs, on which Jain stūpas with all their accessories are fully represented, closely resembling those hitherto known to us as Buddhist. Hofrath Prof. Bühler has even gone further and shown that the building and worshipping of stūpas was an ancient practice common not only to the Buddhists and Jains, but also to other and even orthodox Brahmanic orders of ascetics. One of the most curious discoveries is an inscribed and sculptured slab, which formed the pedestal of a Jain statue. It shows the representation of a Wheel mounted on a trident, exactly in the same way as seen on Buddhist monuments, and proves that the celebrated Wheel is not a distinctive mark of the Buddhists. The inscription states that the statue was put up by a Jain lay-woman under the advice of her spiritual director, and the portrait-figures of these are sculptured on the slab in the act of worshipping the sacred symbol. The inscription further states that the statue was put up in a year probably corresponding to 157 A.D., at a votive stūpa which was built by the Gods. That phrase "built by the Gods" shows that the stūpa must have been an extremely ancient one, since in the second century A.D. its real origin had already been forgotten, and a myth did duty for historical truth. The conclusion is inevitable that the stūpa must have been erected several centuries earlier, and this is confirmed by a tradition which Hofrath Prof. Bühler has discovered in one of the Jain books.<sup>7</sup> According to that tradition, the stūpa was still in existence in the middle of the ninth century A.D., when it underwent repairs, and was encased in stone. Originally it is said to have been built of bricks, and to have enshrined a gold casket dedicated to Pārṣvanātha. This gold casket had been brought, as it is said, by the gods to Mathurā, and was for a long time kept exposed to view for the worship of the Jains;

<sup>7</sup> Jinaprabhā's Tīrthakalpa; see the Transactions of the Vienna Academy of Sciences, Vol. CXXXVII.

but afterwards, when one of the ancient kings of Mathurā attempted to appropriate it, a brick stūpa was built over it. This probably refers to the second century before Christ, when the Jains settled in Mathurā and when they may have brought the casket with them from Bihār : the king might be the Indo-Scythian Kanishka, who reigned about the commencement of our era.

While thus the period under review has been one of fundamental importance for our knowledge of the history of Jainism and its founder, it has not been altogether unfruitful with respect to the great rival organisation of Buddhism. The history, indeed, of that order and of its founder has long been well known, yet, curiously enough, until quite recently, none of the localities connected with the most important events in Buddha's personal history, such as his birth and death, had been identified. There was certainly one good reason for this curious circumstance ; for, as it now turns out, those localities are outside our borders, within the territory of Nepal, and therefore have been precluded from the search operations of our archæological surveys.

With the discoveries in this respect the name of one of the members of our Society, Dr. L. A. Waddell, the learned author of *Buddhism in Tibet*, is prominently connected. The zeal with which he has devoted a portion of his holidays and the opportunities afforded by official tours to the search for long lost Buddhist localities cannot be too highly praised. In 1891 he succeeded, on one of his tours, to discover near the village of Uren, in the district of Mungir, the site of the celebrated Hermitage of Buddha, where that saint is reported by Hiuen Tsiang to have rested for a season during the rains. The full details of this identification have been published by Dr. Waddell in our Journal.<sup>8</sup> Subsequent researches enabled him to discover in the neighbourhood of Patna City what appears to be conclusive evidence of the exact position of the great emperor Aśoka's famous capital of Pāṭaliputra.<sup>9</sup> The evidence thus furnished, in 1892, is at present being followed up, so far as financial considerations permit, by the Government of Bengal.

The most important discovery, however, to which his studies of old Buddhist history have led, is that of Buddha's birth-place in the neighbourhood of a small village called Niglivā. This is situated, just beyond the British frontiers, within the Nepalese Terai, about 20 miles north of the Chilliā Police Station in the Basti District. Rumours of the existence near that place of one or more inscribed pillars had been cur-

<sup>8</sup> See Volume LXI, for 1892.

<sup>9</sup> Published in his pamphlet on the *Discovery of the Exact Site of Aśoka's Classical Capital of Pāṭaliputra* ; 1892.

rent for many years. Mr. V. A. Smith had heard of one "a dozen years ago." But they took more definite shape in the spring of 1893 when a Nepalese Officer, Major Jashkaran Singh of Balrāmpur, saw and reported an Aṣṭka pillar in the Terai. Through the information thus furnished Dr. Führer was enabled in March 1895 to visit the spot, and to find there, on the banks of the Nigāli Sāgar, a pillar, with an edict of king Aṣṭka inscribed on it. This edict, when deciphered in April 1895 by Hofrath Prof. Bühler,<sup>10</sup> proved that the ruins of a stūpa close by were those of the funeral monument of the mythical Buddha Kōṇāgamana. Dr. Führer also noticed in the neighbourhood "vast ruins" which clearly pointed to the existence there of a large inhabited place in ancient days. A report of these discoveries was published by him in July 1895. As soon as Dr. Waddell, who had for some time made Hiuen Tsiang's account of Buddha's birth-place a special study, read the newly-found edict, he at once saw the clue which it supplied towards fixing the site of that place in the neighbourhood of the Kōṇāgamana stūpa and its pillar. He published his discovery in June 1896,<sup>11</sup> pointing out that, in accordance with the indication given by Hiuen Tsiang, Kapilavastu, the birth-place of Buddha, must be within a few miles distance of Niglivā. Thereupon the Government of India was moved, both by Dr. Waddell and Dr. Führer, to obtain the permission of the Nepalese Darbar to explore the site thus indicated, in order to verify its being that of Kapilavastu. That permission having been secured, and Dr. Waddell's services not being available, Dr. Führer was deputed to carry out the desired verification. In November 1896 he proceeded to Niglivā, and finding that the Nepalese Government were not prepared to undertake excavations, he went on, south-eastward, to Bhagwānpur, where he had been told, in the previous year, of the existence of another inscribed pillar. He there found the looked-for pillar on the 1st December 1896, and upon it an inscription which identified the spot upon which it stood as the celebrated Garden of Lumbini in which Buddha is said to have been born. Starting from this spot as a fixed point, Dr. Führer next discovered the ruins of Kapilavastu, at a distance of twelve miles north-west of it, and five miles west of Niglivā. This places Kapilavastu practically at the point indicated for it by Dr. Waddell.<sup>12</sup> It still remains to explore the site of that celebrated town, and to excavate its more prominent ruins. This is a task which, as I learn from Dr. Führer, is at present in progress under his superintendence.

<sup>10</sup> See the *Academy*, for 27th April 1895.

<sup>11</sup> In the *Englishman* of the 1st June 1896.

<sup>12</sup> For further particulars see Dr. Führer's *Annual Progress Reports* for 1893-97; also *Journal*, Royal Asiatic Society, for 1897, pp. 429, 615, 644.

With the discovery of Kapilavastu, it will now be possible also to identify definitely Kusinagara, the place where Buddha died. It is probable that it will be found to the eastward, either just within or just without the frontier-line dividing British and Nepalese territory. To discover this celebrated spot must be the next object of archaeological research.

**Archæology and Epigraphy.**—I will now proceed to give you some account of our progress in Indian archæology and epigraphy.

The earliest specimen of Indian writing known to us is that which is found in the celebrated Aṣōka inscriptions. Aṣōka reigned in the latter half of the third century B.C. His capital was at Pāṭaliputra, the modern Patna, but he ruled over an empire which probably had the widest extension ever attained by any under a native Indian ruler. This is shown by the wide distribution of the edicts which he caused to be engraved on rocks and pillars throughout his dominions, and in which he promulgated his regulations for ordering the moral and religious welfare of his subjects. These edicts have been found as far east as Dhaulī in Orissa, as far west as Shāhbāzgarhī beyond the Indus, and as far south as Siddāpur in Mysore. The northern extension of Aṣōka's empire is shown by the recent discovery (in 1895) of a pillar inscription of his in Niglivā, within the Nepalese frontiers. The Mysore edicts, too, are a recent discovery, having been found by Mr. Lewis Rice in 1892 near the village of Siddāpur, in the Chitaldrūg district in the Mysore State. One of these Aṣōka edicts forms a connected series of fourteen paragraphs. It occurs in a nearly identical version engraved on large rocks or boulders at six different places, among them at Gīrnār in Junāgarh, at Mansehra near Abbottabad, and at Shāhbāzgarhī. At these three places, the three last paragraphs of the edict had long been missing; but quite recently, they have been recovered, either wholly or in part. One was discovered by Major H. A. Deane, in 1887, another by a subordinate officer of the Archaeological Department in 1889, and the third by Rāe Bahādur Gopālji S. Desai in 1893.<sup>13</sup>

Until recently it had been customary to call the script used in these inscriptions the "Aṣōka characters," because for a long time they had not been observed to occur in any inscriptions but those of Aṣōka. Gradually, however, other inscriptions came to light, exhibiting the same characters. They were observed, *e.g.*, on very early coins of Græco-Indian and other dynasties; and they also appear on the sculptures of the Barhaut stūpa which may be seen in one of the galleries

<sup>13</sup> Published by Hofrath Prof. Bühler in the *Epigraphia Indica*, Vol. I, p. 16, in the] *Vienna Oriental Journal*, Vol. VII, p. 318, and in the *Journal of the German Oriental Society*, Vol. XLIV, p. 702.

of the Indian Museum. Since then they have been found, for example, in an inscription of the Pabhosa cave which was discovered in 1887 by Mr. J. Cockburn of the Opium Department,<sup>14</sup> in another found in the same year by the late Kavirāj Syamal Dās near Nagari in Mewar, and in the curious copper-plate, discovered by Dr. Hoey in 1894 at Solhaurā in the Gōrakhpur District.<sup>15</sup> The name "Açōka character" was, therefore, found very misleading and inconvenient. Hence, seeing that Açōka belonged to the Maurya dynasty, the term "Maurya characters" or "Maurya script" has now generally been adopted. This Maurya script is the lineal ancestor of the modern Northern Indian scripts, notably of the best known among them, the Nāgarī or Dēvanāgarī. There are few things so interesting in archæology as the history, with all its concomitant details, of the evolution of the modern scripts of Northern India. But unfortunately, till recently, the absence of a good text-book on the subject was felt to be a great hindrance. A very creditable attempt to supply this want was made by a native scholar Ganrishankar Hirachand Ojha of Udaipur in his *Palæography of India*, published in 1894. But still more was required, and this has now been supplied by Hofrath Prof. G. Bühler of Vienna, who is *facile princeps* in all matters appertaining to Indian epigraphy and palæography. His excellent and exhaustive *Indian Palæography* was published in 1897, and forms a portion of the Encyclopædia of Indo-Aryan Research, which is being brought out under his general editorship, and which will present a summary of everything that modern research has established in the domains of Indian philology and archæology. The name Brāhmī has been adopted by him as a general term for all the Northern Indian types of alphabet. A cursory survey of these types will show that their evolution has produced a very marked change in the form of the letters about the middle of the fourth century A.D. The oldest type of the preceding period is represented by the Maurya script of the time of Açōka. The oldest type of the second great period—that type with which this period commences—is what is known as the "Gupta characters." This script is called so because it is used by the kings of the Gupta dynasty who reigned in the fourth and fifth centuries A.D., first in Pāṭaliputra or Patna and afterwards either in Kōṣāmbī or in Ayōdhya,<sup>16</sup> and whose empire was

<sup>14</sup> Published by Mr. Cockburn in our *Journal*, Vol. LVI, p. 31, by myself in the *Proceedings* As. Soc. Beng., for 1887, p. 103 and by Dr. Führer in the *Epigraphia Indica*, Vol. II, p. 242.

<sup>15</sup> Published by Dr. Hoey, Mr. Smith, and myself in our *Proceedings* for 1894, p. 84, and by Hofrath Prof. Bühler in the *Vienna Oriental Journal*, Vol. X, p. 138.

<sup>16</sup> See Mr. V. A. Smith, in *Journal*, Royal Asiatic Society, for 1897, p. 910.



for a time almost as extensive as that of Aṣōka. The second period may be reckoned to have extended to the end of the twelfth century A.D. From that time the Northern Indian alphabets as they now exist have practically become established. The earlier period, also, seems to me to divide itself similarly into two sub-periods about the commencement of the Christian era. The later sub-period is characterised by the "Indo-Scythian characters," used under the kings of the Indo-Scythian dynasty, in the first and second centuries A.D. Their empire was in North-Western India and reached as far as Mathurā, where the numerous Jain inscriptions written in the Indo-Scythian script, referred to in the preceding part of my address, have been found.

In this connection I may note a remarkable discovery, made by Dr. W. Hoey in 1896 in Gōpālpur in the Gōrākhpur District.<sup>17</sup> It is that of a few bricks of large size ( $10\frac{1}{2}$  by  $4\frac{1}{2}$  inches) inscribed with portions of certain Buddhist sacred books. They were dug out from an underground chamber, and the circumstance of some Indo-Scythian copper coins having been found with them shows that their deposition must be referred to the third century A. D. This is confirmed by the character of the writing which is transitional between the Indo-Scythian and Gupta scripts. With the exception of the legends of the Gupta coins, inscriptions dating from the period between 250 and 400 A.D. were almost altogether lacking. The discovery, therefore, of these bricks now helps to fill up a considerable gap in Indian epigraphy. Moreover it is startling to find the Indian Buddhists using bricks, as the Assyrians did, to preserve long documents. Speaking of Gupta coins I may mention that we now possess an excellent and exhaustive monograph on the subject, published in 1889 and 1892 by Mr. V. A. Smith in the *Journal of the Royal Asiatic Society*.<sup>18</sup> Some of the gold coins and medals, issued by the kings of the Gupta dynasty, are among the finest known in Indian Numismatics. With regard to this dynasty a very important discovery was made in 1888 at Bhitari in the Ghāzipur district. This was a large seal of copper and silver, the legend on which in 1889 I succeeded in deciphering,<sup>19</sup> and which proved that the dynasty consisted of nine members instead of the seven hitherto known. The two new members are Pura Gupta and Kumāra Gupta II. The history of two earlier members, Samudra Gupta and Candra Gupta, has been examined in detail in three very interesting papers published by Mr. V. A. Smith in

<sup>17</sup> Published by Mr. V. A. Smith in our *Proceedings* for 1896, p. 99.

<sup>18</sup> Also in our own *Journal*, Vol. LIII, for 1884; see also his papers on "Numismatic Novelties" in our *Journal*, Vols. LXV and LXVI.

<sup>19</sup> Published in a joint-paper by Mr. V. A. Smith and myself in our *Journal*, Vol. LVIII, for 1889.

the Journal of the Royal Asiatic Society for 1897.<sup>20</sup> All inscriptions in the Gupta character, known up to the year 1888, have been collected by Dr. J. F. Fleet and published by him, with facsimiles, in the third volume of the *Corpus Inscriptionum Indicarum*, in the introduction to which he has also finally settled the hitherto much disputed epoch of the celebrated Gupta era to be the year 319-20 A.D.<sup>21</sup>

For long the prevalent opinion has been that the introduction of the art of writing into India took place in the third century B.C., during the rule of the Maurya dynasty. This opinion was based on the fact that the earliest specimens of writing, though incised in places as widely apart as Orissa and Gujarāt, appeared on the first view to show no local varieties in the shape of their letters. More accurately made facsimiles and a more thorough and minute examination of these facsimiles, such as Hofrath Prof. Bühler and Mr. E. Senart have latterly made and published in the Journals of the German and French Asiatic Societies, have now brought to light the fact that smaller local varieties are by no means absent. The most striking evidence, however, of the existence of a well-marked local variety has been afforded by the inscriptions on the relic-casket, found in 1891 in the Bhaṭṭiprolu stūpa in the Kistna District of the Madras Presidency. These inscriptions, as Hofrath Prof. Bühler has discovered,<sup>22</sup> show a system of writing which in some respects is radically different from that prevailing in the more Northern inscriptions of Aṣōka. Thus, to mention only one point, the Bhaṭṭiprolu alphabet contains one new letter ( *l* ) and five new forms of other letters ( *gh*, *j*, *m*, *e*, *ṣ* ). It is obvious that this discovery throws a new light on the question of the age of the art of writing in India. Such a marked variation cannot have sprung up in a short time, but must have had a long history before the time of Aṣōka. With this new light, and with the help of accurate facsimiles now available, Hofrath Prof. Bühler subjected the question of the age and origin of the Brāhmī script to a fresh searching investigation.<sup>23</sup> Their result is to render two facts extremely probable: first that the Brāhmī script is directly derived from the eldest Phœnician alphabet, and secondly that it was in common use in

<sup>20</sup> See Articles I, II and XXIX in that Journal.

<sup>21</sup> The title of this volume is *Inscriptions of the Early Gupta Kings and their Successors*. On the epoch see also Dr. Fleet's paper in the *Journal of the Bombay Branch of the Royal Asiatic Society*, Vol. XVIII, for 1891, p. 71.

<sup>22</sup> Published in the *Academy* for May 1892, *Vienna Oriental Journal*, Vol. VI, p. 148, and *Epigraphia Indica*, Vol. II, p. 323.

<sup>23</sup> Published in the Transactions of the Vienna Imperial Academy of Sciences, Vol. CXXXII, under the title: *Indian Studies*, No. III, on the "Origin of the Indian Brāhma Alphabet." A very useful abstract of Hofrath Prof. Bühler's argument is given by Dr. G. A. Grierson in the *Indian Antiquary*, Vol. XXIV, p. 246.

India during the fifth, and perhaps in the sixth, century B.C. The Brāhmī script, like the English, runs from the left to right, while the Phœnician script, like the Hebrew, used to run from the right to the left. If Hofrath Prof. Bühler's theory is correct, one may expect to find in India some evidence of the change of the direction in writing. Curiously enough such evidence does exist. A coin has been found by the late Major-General Sir A. Cunningham<sup>24</sup> in Eran, in the Central Provinces, which clearly exhibits a legend in Brāhmī characters running from the right to the left. It is probably of about the same age as the Aṣōka edicts, that is, about the third century B.C.; and as these edicts themselves occasionally show single letters placed in that reversed direction, it becomes very probable from these isolated survivals that the great change of the direction in writing the Brāhmī characters took place in India in the course of the fourth century B.C. I may here mention another discovery made by myself, which corroborates the Indian tendency of changing the direction of writing. By the side of the Brāhmī characters, there was another, quite distinct script in use in India at the time of king Aṣōka. This is the so-called Bactrian or Arian-Pali, or as it is now called the Kharoṣṭhī script. Its use was limited to North-Western India, from the Panjāb westwards, while through the whole of India eastwards and southwards the Brāhmī script, in some one or other of its varieties, was current. Hofrath Prof. Bühler has shown<sup>25</sup> that this secondary Indian script is of somewhat later date than the Brāhmī, that it arose from an Aramean alphabet used in Persia in the sixth century B.C., and that it spread into India only in the fifth, or perhaps even as late as the fourth century B.C. It is a script, which like its source, the Aramean, runs from the right to the left; and it is found written in that fashion in the Aṣōka edicts and all other inscriptions. There is only one exception, namely two coins of the Indo-Parthian king Abdagases who probably reigned in the first century B.C. in the regions about the Indus. They were obtained by Mr. J. A. Bourdillon from the Gayā Bazar, and I discovered on them a legend in the Kharoṣṭhī characters, but running from the left to the right.<sup>26</sup> This shows that a process of change in the direction of writing those characters was beginning to spring up in India in the first century B.C.; and it is not impossible that the change might have, in the course of time, fully established itself within the borders of India, just as it did in the case of the Brāhmī alphabet, but for the circum-

<sup>24</sup> Published by him in his *Coins of Ancient India*, p. 101, Plate XI, fig. 18.

<sup>25</sup> See his paper in the *Vienna Oriental Journal*, Vol. IX, p. 44.

<sup>26</sup> Published by me in our *Proceedings*, for May 1895, and in our *Journal*, Vol. LXVI, Part I, (for 1897). p. 139, Plate VI, figs. 7 and 8.

stance that the custom of using the Kharōṣṭhī script died out in India too early to admit of any such radical change. For that script probably ceased to be used in India about the end of the second century A.D., though it continued to be current for a much longer period in the countries bordering on India in the West and North. In those regions its use probably survived until the time of their conquest by the Muhammadan Arabs in the eighth century A.D., when it was superseded by varieties of the Arabic script. On this subject some more evidence has recently come to light. In 1895, Mr. A. Caddy, who had been deputed by the Government of Sir Charles Elliott on archaeological exploration, excavated a large statue of a standing Buddha at the Lorian Tangai stūpa, in the lower Swat valley, on the pedestal of which was found a short inscription in the Kharōṣṭhī characters, dated in the year 318. A similar inscription dated in the year 384 appears on the pedestal of another standing figure of Buddha, discovered in 1853 by Mr. L. White King, at Hashtanagar, in the Peshawar District, and published by Mr. V. A. Smith in our *Journal*. The era of these two dates is still a matter of dispute, but so much is certain that they carry us well into the fourth or fifth century A.D.<sup>27</sup>

These dated inscriptions in the Kharōṣṭhī characters have an important bearing not only on the subject of palæography, but also on the question of the age of Græco-Buddhist art in the countries on the further side of the Indus. Into the latter subject, however, I cannot enter now, both because it is foreign to the matter of epigraphy and palæography which I have now in hand, and because much of it also lies outside the period I am now reviewing. For the existence of a considerable Greek influence on the Indian Buddhist art in the countries bordering on the Indus has long been known. But I will not pass on without calling attention to two masterly essays by Mr. V. A. Smith, on "Græco-Roman Influence on the Civilization of Ancient India," published by him in 1889-92, in the *Journal of our Society*,<sup>28</sup> and highly praised by Professor Grünwedel of Berlin in his "Buddhistic Art in India." Mr. Smith reviews the subject from every point of view, discussing principally the subject of sculpture, but also touching on

<sup>27</sup> The era may either be that of Kanishka, commencing in 78 A.D., or of Megha commencing about 40 B.C. Accordingly 318 may be equivalent to 396 or 278 A.D., and 384 to 462 or 344 A.D. The latter date has hitherto been read 284, but, as Dr. Bloch informs me, it is undoubtedly 384. See our *Journal* Vol. LVIII, p. 44; also *Indian Antiquary*, Vol. VIII, p. 257.

<sup>28</sup> See Vols. LVIII and LXI, p. 50, 107ff. Professor Grünwedel's book was published in 1893; see there, p. 79.

architecture, painting, coinage, drama, religion, mythology, science and philosophy. I may note, as two of the main results of his review, the conclusions that the Gandhāra or Peshawar school of sculpture followed the lines of Roman art, and is not the direct descendant of pure Greek art; and that the history of that school was practically at an end by A.D. 450.

All the specimens of writing which I have hitherto referred to are examples of what is called the lapidary or diplomatic style. It is the style which was peculiar to the clerks of the "kutcheries" or offices of the government or other great establishments, and which was used by them for the purpose of engrossing royal edicts, donations, etc. The manuscript copies, prepared by these professional writers, were afterwards reproduced by skilled artisans on stone or copper or other enduring material; and it is in these reproductions that the inscriptions I have referred to have come down to us. In most cases probably the original writing was made by the professional scribe on the permanent material itself. Anyhow, if any were made on perishable material, such as palm-leaf or paper, none have come down to us. The requisite of the diplomatic style of writing is that it should be calligraphic, that is, clear and legible, and more or less elegant and ornate. In these respects it differs from what is called cursive writing, or that which is used in correspondence and all the ordinary concerns of life. Here the object is not permanence but quickness; the letters are formed with a running hand, they have a tendency to join one another, and to modify their original shape. On the other hand, diplomatic writing has a tendency to conserve older and simpler forms. It represents conservation in the history of the art of writing, while cursive writing represents progress. It follows, therefore, as a general principle in palæography, that advanced forms of letters mark cursive writing, and that if we meet with a few letters of a cursive form in a document otherwise written in older forms, they have been adopted from the fashions of the cursive writing of the period. Gradually these adoptions grow more extensive; but by the time they include the whole circle of the alphabet, the changes in cursive writing have also advanced a step further. It thus comes to pass that the diplomatic writing of any particular period represents on the whole the state of the cursive writing of the period immediately preceding. These are principles which are now generally admitted in Indian palæography, but it was Hofrath Prof. Bühler who first directed prominent attention to them.

It is obvious that cursive writing, as a rule, can only be expected to be met with in manuscripts. No manuscripts, as I have already remarked, have come down to us, dating from the earliest period of

writing in India. No manuscript has, as yet, been discovered written in the Maurya characters like those of the time of Aṣṭaka. But that cursive writing did exist in those days is shown by the casual occurrence of advanced forms of letters in the Aṣṭaka inscriptions, and that it cannot have been at all uncommon in the daily concerns of life is shown by numerous references to it in the oldest Indian literature. Thus we hear of a slave getting himself a rich wife by means of a forged letter, and another going to a school to learn writing together with the son of his master, who was a Seth or banker, or again of a teacher corresponding with his pupils.<sup>29</sup> The style of writing used by bankers must have been then, as it is now, of a very cursive kind. All this points to a very early knowledge of the art of writing in India. It may very well go back, as Hofrath Prof. Bühler suggests, to the sixth century before Christ.

That actual manuscript evidence of such an early age will ever be found is extremely improbable. The commonest writing material in those days were *parṇa* or leaves, that is, no doubt, the same kind of palm-leaves as those which are still occasionally used in Orissa and elsewhere. In the climate of India such manuscript materials would not conserve for any considerable length of time. It would have been different, if we had to deal with climatic and meteorologic conditions, such as we have in Egypt or Central Asia. It is not till we come to the commencement of our era that we first meet with manuscripts preserved down to our days. The oldest manuscripts, known until quite recently, were some scraps of inscribed birch-bark, found in 1834 by Mr. Masson in one of the stūpas of Afghanistan.<sup>30</sup> These were inscribed with Kharoṣṭhī letters, but were too minute to be of any service. However, we possess now a more serviceable manuscript of the same description, and of about the same age. This consists of a few detached leaves of birch-bark, inscribed with Kharoṣṭhī characters, and in the Pāli language, which appear to have once formed a portion of the Dhammapada, one of the well-known sacred books of the Buddhists. Some of them were obtained in 1891 in Central Asia, by the French explorer M. Dutreuil de Rhins, who unhappily soon afterwards was murdered at the hands of Tibetans. These leaves ultimately found their way to Paris, while others, secured by Russian explorers, went to St. Petersburg. They had evidently once belonged to the same manuscript. Photographic facsimiles of them were exhibited in 1897 at the Eleventh International Congress of Orientalists in Paris, by Mr. E. Senart

<sup>29</sup> Numerous other examples will be found in Hofrath Prof. Bühler's essay on the "Origin of The Brāhmī Alphabet" above referred to.

<sup>30</sup> It was one of the Nandāra Topes; see *Ariana Antiqua*, p. 84.

and Professor S. von Oldenburg. In their opinion the manuscript could not be of much later date than the Christian era, and might, possibly, be even older.

It is thus curious that what is probably the oldest Indian manuscript should have been obtained outside India, in Central Asia. Yet after all, it is perhaps nothing more than might have been expected. Indian civilization and Indian literature was carried by the Buddhist propaganda into Central Asia as early as the commencement of our era. Their settlements extended as far as Khotan, Kuchar and the borders of China proper. What was thus carried out of India stood a very good chance of being preserved by the dry climate and soil of the Central Asian deserts, the wonderfully conserving power of which seems to be as great as that of Egypt. Indeed, to judge from the abundant yields of recent explorations, Central Asia promises to be as fruitful a mine of epigraphical discoveries as Egypt has proved to be. In Central Asia nothing seems to decay but what is destroyed by the ignorance or the malice of men.

It is to Central Asia that we also owe our oldest manuscript in the Brāhmī alphabet. This is the well-known Bower Manuscript, the date of which cannot be later than 450 A.D., and may be much earlier. My edition of the text of this manuscript, entrusted to me by the Government of India, was completed last year. An introduction, narrating its history and discussing its age, contents, etc., is now under preparation. Its history, which is not without interest on account of its connection with other important discoveries, those of the Weber and Macartney Manuscripts, I will briefly relate. The Bower Manuscript is called after Captain Bower, who, on his tour of Central Asian exploration, in 1890, obtained it in Kuchar from a Turkī visitor. The latter also showed him the place where the manuscript had been dug out. It was the site of an ancient Buddhist *viḥāra* or monastery, partly consisting of cells cut in the rock of a neighbouring hill. In connection with this *viḥāra* there were also the ruins of an ancient stūpa, from the relic chamber of which the manuscript had been dug out precisely in the same way, as the scraps of inscribed birch-bark and other relics had been obtained by Mr. Masson in 1834 from the old Topes of Afghanistan.

From information received by me later on from Mr. Macartney, the British Political Agent in Kashghar, it appears that at some time in 1889 a Turkī merchant of Kuchar (probably Captain Bower's visitor), in conjunction with a friend of his named Dildār Khān, an Afghan merchant of Yarkand, undertook, secretly for fear of the Chinese authorities, to excavate the stūpa in question. Their object in digging into

it was to find treasure, as it was well known that in the time of Yaqūb Beg much gold had been discovered in such ancient buildings. Probably the Afghan also knew that in his own country the excavation of stūpas had occasionally yielded golden results. Whether or not they found any treasure is not known, but what they do admit to have found was a large number of manuscripts together with a quantity of bones. The hole which they made into the stūpa was excavated straight in, level with the ground, and the manuscripts, accordingly, would seem to have been found in the centre of the stūpa, on the ground level, exactly in the spot where the original deposit of relics is usually met with in such monuments. The two friends divided the spoil between them. The Turki secured as his share the Bower Manuscript, which he afterwards disposed of to Captain Bower in 1890. The Afghan received the other moiety of the manuscripts. Of this he gave, apparently in 1891, one portion to the Russian Consul Petrovski in Kashghar. The latter forwarded it to St. Petersburg where specimens of it were published by Professor von Oldenburg in the Journal of the Imperial Russian Archæological Society. The remainder Dildār Khān took away with him to Leh in 1891. Here he gave one portion of it to Munshi Aḥmad Dīn, who in his turn presented his acquisition to Mr. Weber, the Moravian Missionary. The latter transmitted it to me, and specimens were published by me in our Journal in 1893. The remaining portion Dildār Khān took with him to India, where he left it with a friend of his in 'Aligarh. On a subsequent visit to India in 1895, he brought it away again and presented it to Mr. Macartney. The latter forwarded it in 1896 to the Foreign Office in Simla, whence it was transmitted to me, and specimens of it were published by me in our Journal for 1897.

When I came to examine more closely the manuscripts received from Mr. Weber and Mr. Macartney in order to compare them with those sent to St. Petersburg, I discovered that between them they contained portions of the same Buddhist work. This work tells the story of a certain General Māṇibhadra, how he visited Buddha, became a convert to Buddhism, and was taught by him a wonderfully effective charm. With the two-thirds in my hands, and the one-third in St. Petersburg, it will now probably be possible to publish the entire work, and I would suggest that the British and Russian Governments combine to do so.

The principle of giving *suum cuique* is one which it is well to observe on all occasions. Accordingly I have called the manuscripts received by me from Mr. Weber and Mr. Macartney by their names, the Weber Manuscripts and the Macartney Manuscripts. Similarly I



have called some other Central Asian manuscripts which I received from Captain H. S. Godfrey, Assistant British Resident in Kashmir, the Godfrey Manuscripts. These two gentlemen, Mr. Macartney and Captain Godfrey deserve the greatest credit for the zeal and circumspection with which they have been collecting not only manuscripts but also other antiquities from that part of Central Asia which is known as Chinese or Eastern Turkistan, and assisting me in making a collection worthy of our country. Their efforts are being ably seconded by Colonel Sir Adalbert Talbot, K. C. I. E. the British Resident in Kashmir. Central Asian archæological exploration is being more and more vigorously conducted every year. France and Russia have been in the field for some years. They have latterly been joined by Sweden, whose energetic explorer Dr. Sven Hedin has returned from a prolonged tour in Eastern Turkistan with a large collection of antiquities. Feeling that it would not do for Great Britain to be outstripped in these researches, I suggested to the Government of India the desirability of instructing their Political Agents in Kashghar and elsewhere to endeavour to collect Central Asian antiquities. This was in 1893, while I was working at my edition of the Bower Manuscript. My suggestion was heartily seconded by Sir Charles Lyall, K. C. S. I. (then the Home Secretary), and the Government of India, approving it, issued necessary instructions in August 1893. Since then a large number of such antiquities has been secured, and more are coming in. All acquisitions are transmitted to me, under the orders of the Government of India, for examination and report: their final place of deposit is to be the British Museum in London.

These antiquities consist of terracottas, coins, images and miscellaneous objects of metal, stone or other material; but the main portion is formed of manuscripts. A regular, or perhaps I should rather say an irregular, trade in such antiquities seems now to have sprung up. Captain Younghusband, in the interesting account of his travels through *The Heart of a Continent*, tells us how he advised one of his Musalmān guides, whose great ambition was to visit England, to "search about among the old ruined cities of that country and those buried in sand, in order to find old ornaments and books for which large sums of money would be given him in England." Eastern Turkistan which is now to a great extent an arid desert of sand, seems to have been a fairly fertile country about the commencement of our era. Two great trade routes passed through it from China to Western Asia. One skirted the foot of the Tian-Shan mountains, along its northern borders, running by the town of Kuchē or Kuchar; the other passed by the Kuen-lun mountains and the town of Khotan on the south. It is principally from these two towns and the intervening desert coun-

try that the antiquities we now possess have been procured. Some were obtained in Kuchar, but most of them came from the Takla Makan Desert, lying north of Khotan. That desert is, by the natives of Kashgharia, believed to have been once a fertile and cultivated country. There is a tradition that before the introduction of Muhammedanism, in the eleventh century A.D., forty-one cities flourished in that region, but that by reason of the obstinate disbelief of the inhabitants, who were mostly idolaters, their country was suddenly and miraculously destroyed by a sandstorm. It is certain that the town of Katak, which probably lay about midway between Kuchar and Khotan, was buried and destroyed by the sands about 1330 A.D. But this process of submersion under the "moving sands" as they are fitly called by the natives, has been going on for centuries, as we know from the Chinese Buddhist pilgrim Hsien Tsiang who travelled through Eastern Turkistan in the middle of the seventh century. Very graphic accounts of the appearance and action of the moving sands are given by Dr. Bellew, Captain Younghusband and other travellers. "During the spring and summer months a north or north-west wind prevails. It blows with considerable force and persistence for many days consecutively. As it sweeps over the plain, it raises the impalpable dust on its surface, and obscures the air by a dense haze resembling in darkness a November fog in London, but it drives the heavier particles of sand before it, and on the subsidence of the wind, they are left on the plain in the form of ripples like those on the sandy beach washed by an ebbing current." In course of time there is formed "a perfect sea of loose sand advancing in regular wave lines from north-west to south-east. The sand dunes are mostly from ten to twenty feet high, but some are seen like little hills, full a hundred feet high, and in some spots higher. They cover the plain, of which the hard clay is seen between their rows, with numberless chains of two or three or more together in a line, and follow in successive rows one behind the other." It is these moving sands that have engulfed whatever of the ancient civilization of Eastern Turkistan escaped the devastations of consecutive wars and conquests.

That civilization must have been of a very mixed kind; for Eastern Turkistan was the meeting place of the culture of India, China and Western Asia. Indian civilization was carried there by the early Buddhist propaganda about the commencement of our era. Somewhat later the semi-Greek culture of Parthia and Armenia and the indigenous civilization of China were brought into the country by the merchants and soldiers that travelled or marched by the two great trade-routes already referred to. These were followed still later, from

the sixth to the eighth centuries, by the civilization of the Nestorian Christian Missionaries, and finally, from the ninth century, by the Arab Muhammadan conquests.

It can be easily imagined that such a mixture of civilization would betray evidences of its existence in the antiquities recovered from the sand-buried tracts and towns of the country. Such is really the case. The antique objects which have now accumulated with me, owing principally, as I have already remarked, to the exertions of Mr. Macartney and Captain Godfrey, divide themselves into four classes: manuscripts, coins, terra-cottas, and miscellaneous objects. Some of the manuscripts have been dug out from old Buddhist ruins near Kuchar, and belong to the most ancient portion of the collection. But all the rest have come from the neighbourhood of Khotan, where, as Mr. Macartney informs me, "these relics are in such abundance that a few persons of that town make a regular livelihood as treasure-seekers. After a sandstorm or a flood they will proceed to such sand-buried localities as seem most promising in the hope of picking up some objects in gold or silver which had been laid bare by the wind or water."

The manuscripts obtained from Kuchar are the Bower MS., the Weber MSS., and a few of the Macartney MSS. The peculiarity of these is that they are all written in two species of the Indian Brāhmī alphabet. One of these is a species which was actually current in North-Western India up to the sixth century A.D. And it follows, therefore, that the manuscripts written in this variety of the Brāhmī, —commonly known, in a general way, as the Gupta characters—were either imported from India or written by Indian Buddhists who had settled in Kuchar. It follows farther that these manuscripts cannot well be later than the sixth century, though they may be much older. In fact, the Bower MS. probably belongs to the fifth century, and one of the Macartney MSS. which has a still more archaic appearance, to the fourth century A.D. The interest of these manuscripts, apart from their great palæographic value, principally lies in two points: the direct evidence which they afford of the early existence of Indian Buddhism in Kuchar, and the light which they throw on the history of Indian Medicine. They mainly contain medical treatises, and thus not only prove the very early existence, hitherto much doubted, of the science of medicine in India, but also that the profession of medicine, in those early days, was inseparable from that of sorcery and astrology, and that, in fact the monkish owner of the manuscripts was a "medicine-man" rather than a "medical man."

The Bower Manuscript is written on leaves of birch-bark, while all the other Central Asian manuscripts are written on paper of varying

texture and colour. Paper appears to have been the usual writing material in Eastern Turkistan. The art of paper making has been known for ages in China; it has also been practised for a long time in the Himālayan countries. It cannot, therefore, be a surprise to find that it was also known in Eastern Turkistan, which from almost the beginning of our era has been in more or less close political connection with China. The birch, on the other hand, is not known in Eastern Turkistan, while it is found in the Himālayas, and its bark is used as common writing material in Kashmīr. This is an additional proof of the Bower Manuscript being an Indian product, exported to Central Asia.

Most of the Macartney Manuscripts, as I have already remarked, come from the neighbourhood of Khotan. They were found or dug out at different places in the Takla Makan desert, generally about 50 or 60 miles distant from that town. The find-spots are sometimes described as ruins of walls of habitations, sometimes as cemeteries. One is described as a solitary mound, and circular, about 5 feet in diameter and 2 feet in height. This was evidently the ruin of an old sepulchral tumulus or stūpa; for in it was found a skull resting on a coarse cloth bag enclosing a manuscript book; and two small copper images of horsemen were dug up from its interior. The whole of this find was received by me exactly in the state in which it had been found.

The manuscripts from Khotan form a surprisingly varied collection, both with regard to condition and script. As to their condition, there are among them bound volumes, detached leaves, and large single sheets. The single sheets appear to have been official documents of some kind; for they mostly bear the inked impress of seals. Many of the detached leaves appear to have originally belonged to a volume, now broken up, whether by the finder or by some other cause, is not known. Of bound volumes I now have twenty-one in my possession. They greatly vary both in shape, size and thickness. Some are nearly square, others decidedly oblong. Some are about eleven, others only about four inches square; some measure  $15 \times 4\frac{1}{2}$ , others only  $10$  or  $7 \times 4\frac{1}{2}$  inches. The number of their leaves varies between 12 and 112. Some are bound, or rather stiched, in the modern European fashion; others are done up like Indian *pōthīs* by means of a string-hole and wooden boards, only instead of a string, a copper nail is passed through the hole. The stiching likewise is done either by means of two or three copper nails, or by twists of paper. The ink which is used is, as a rule, black; only in two or three exceptional cases, it is white; but in either case it is indelible; for all the manuscripts can be washed, without injuring the writing.

With reference to the characters and the language in which these manuscripts are written I am not yet in a position to make any definite statement, as I have had no leisure to make more than a very cursory examination of them. There certainly seem to be at least seven distinct scripts, and from sixteen to twenty varieties. The scripts are all of old types and appear to be Armenian, Kharōṣṭhī, Pahlavi, Turkī, Uigur (or Nestorian), Chinese, and two others as yet quite unassignable. Of course, a script is not any necessary indication of the language in which the book may be written; and so long as the scripts have not been definitely deciphered, it is not possible to determine the number of languages that may be represented in the manuscripts. I may note, however, that in one instance, the manuscript (one of the sealed documents) shows two scripts side by side, a circumstance which may possibly afford a key to the decipherment. Similar help may perhaps be given by another manuscript (one of the Turkī) which seems to contain sketches of seals or coins.

Besides manuscripts, my collection of Central Asian antiquities contains, as I have already stated, a large number of coins (about 300). These, it may be hoped, will prove of great value for the purpose of determining the age of the sand-buried cities. They extend over a considerable space of time, though they are all very old. Some are Chinese, and go back to about the first century B.C.; others are Sassanian of the fourth and fifth centuries A.D. Others again belong to some of the earlier Muhammadan dynasties. Among the earliest coins there are a few of very peculiar interest, because they are bilingual, showing Chinese legends on one side and Kharōṣṭhī on the other. The Kharōṣṭhī legend, according to Dr. Bloch who has kindly examined them for me, appears to refer these coins to Gondophares in the first century A.D.

Among the terra-cottas in my collection, there are a number of pieces of pottery which show Græco-Buddhist designs of that kind which was current in Gandhāra, a portion of modern Afghanistan, in the earliest centuries of our era. Mr. Havell, the Principal of the Calcutta School of Art, has been very helpful to me in re-constructing some very fine vases of this kind from a few detached fragments. There are also numerous full figures of monkeys, from 1 to 3 inches high, in all sorts of postures, rather well made, some playing on the well-known Greek reed instrument, the syrinx, like satyrs. Very curious is one piece which shows an ornamental design peculiar to Assyria. Another piece bears a lightly incised inscription in ancient Brāhmī characters of the fifth century A.D. All this points to an extension, in those early ages, of the Grecian culture of Western Asia into Eastern Turkistan,—a fact which was until now quite unsuspected.

Altogether Central Asia seems to be a country likely to be pregnant with archaeological surprises, and it is satisfactory to know that Great Britain will not be behind other countries in securing a fair share of them.

In connection with the Central Asian manuscripts of which I have been speaking, I must mention a very important discovery which has been recently made by Major H. A. Deane. In 1894 he first discovered a number of inscriptions in an unknown script, incised more or less carefully and distinctly on detached pieces of stone. In the following years he collected further large numbers of inscriptions of the same kind. They have all been found on the northern border of the Peshawar District and in the independent territory beyond it, in the countries, therefore, which anciently were called Gandhāra and Udyāna. Some of them have been published by Mr. E. Senart in the *Journal of the French Asiatic Society*, and the rest by Dr. A. Stein, in our *Journal*.<sup>31</sup> These two scholars have subjected them to a very careful and minute examination, the result of which is that the characters used in them, though probably closely related to one another, show distinct signs of being distributable into five different varieties.<sup>32</sup> But neither of those scholars, nor indeed anyone else hitherto, has been able to discover a key to reading them. There is, however, some ground for believing that ultimately they will be found to be written in some species of Turkī script and language. For some Turkī inscriptions found on the banks of the river Orkhon in Mongolia and deciphered by Professor V. Thompson in 1893, have been compared by Hofrath Prof. Bühler with Major Deane's inscriptions, and he has observed that more than a dozen letters seem to be common to both. Further Professors Levi and Chavannes of Paris have shown from the Itinerary of the Chinese pilgrim Onkong that in the middle of the eighth century A.D. the countries of Gandhāra and Udyāna were united under a dynasty of Turkish nationality and language.<sup>33</sup> Among my Central Asian manuscripts there are several which I suspect may be written in a very early species of Turkī. The characters are of an unknown kind, but, as the result however of a mere cursory inspection, I seem to have noticed resemblances to the characters occurring in Major Deane's inscriptions. Here, therefore, there seems to present itself a possibility of unravelling the puzzle of the inscriptions as well as the manuscripts.

<sup>31</sup> See *Journal Asiatique*, Vol. IV, pp. 332 and 504. Also reprinted as *Notes d'Épigraphie Indienne*, No. V, 1895; and our *Journal*, Vol. LXXVII, 1898.

<sup>32</sup> Three of them, identified by Mr. Senart, have been called by him the *Spantharra*, *Buner* and *Mahaban* varieties. The other two have been discovered by Dr. Stein who gives the name *Nurizai* to the fourth variety; the fifth he does not name.

<sup>33</sup> See *Journal Asiatique*, Vol. VI, p. 378, for 1895.

**Ethnographic and Linguistic Surveys.**—During the period under review two new Surveys have been added to those already existing in India and doing such splendid scientific work.

The first of these is the Ethnographic Survey, which, so far as Bengal is concerned, was under the direction of the Hon'ble H. H. Risley, C.I.E. This survey is one of the direct results of the general census of 1881. It was not commenced, however, before 1885, in Bengal, and it was completed there in 1891 with the publication of Mr. Risley's report in four volumes. In the North-Western Provinces it was taken up in 1892 under the superintendence of Mr. W. Crook, and was completed in 1896, also with the publication of a Report in four volumes. The survey of the Panjāb was started in 1894 under the charge of Mr. Longworth Dames, and is still in progress.

The scheme of these ethnographic enquiries was framed from the first so as to serve two distinct purposes, the one in the main administrative, the other principally scientific,—a distinction which is carefully maintained in the four volumes embodying the results of Mr. Risley's portion of the work. The administrative uses are subserved by his first two volumes which contain, in alphabetical order, in the form of a glossary, an enumeration and description of the tribes, castes, sects and occupations of the people of Bengal. The other two volumes give the scientific part of the enquiry, and consist of the tables of anthropometric data on which Mr. Risley's ethnographic generalisations are based. Special interest attaches to these tables; for they are the first attempt on a large scale to apply the anthropometric system, elaborated by the French school of anthropologists, to the elucidation of the problem of caste which is so prominent in India. In the introduction to his first volume Mr. Risley discusses this problem in the light which is thrown on them by the data collected in the tables. His conclusions may be thus summarised. The whole of India is inhabited by a dolichocephalic or long-headed race. The brachycephalic or broad-headed race occurs only along the northern and eastern borders of Bengal, and can hardly be deemed Indian at all. In the long-headed race, however, two extreme forms can be distinguished, the Aryan and the Dravidian; and between these two extreme forms there are a large number of intermediate groups, each of which forms, for matrimonial purposes, a sharply defined circle, commonly known as a caste, beyond which none of its members can pass. If these groups are arranged in the order of their average nasal index, or the formula indicating the proportion of the length of the nose to its breadth, so that the caste with the finest nose shall be at the top, and that with the coarsest at the bottom of the list, it is found that this order substantially corresponds

with the accepted order of social precedence. Mr. Risley, accordingly, bases the origin of caste entirely on distinctions of race. His theory is directly opposed to that of Mr. Nesfield, Ibbetson and others, who hold that caste originated from differences in the occupations of the people. There is a third theory, the traditional one, according to which caste is derived from an original fourfold division of the population into Brahmans, Kṣatriyas, Vaiṣyas and Sūdras. These three theories have been reviewed by Mr. E. Senart in 1896 in a little work on *The Castes in India*. He shows that none of these theories is capable of accounting for all the facts connected with caste. The essence of the latter lies in restrictions with regard to connubium and commensality. Such restrictions, however, are by no means confined to India, nor even to Aryan races. They are known to have existed among Greeks, Germans, Russians and other Aryan peoples; and it is probable that they also existed among the races that preceded the Aryan immigration into India. It is in them that we must look for the key to the origin of caste in India. Differences of occupation, race and religion contributed to the now existing divisions of caste, but the spirit and to a large degree the actual details of caste restrictions are identical with the ancient, world-wide, and especially Aryan, customs of restricting connubium and commensality. The abatement and final removal of these restrictions among the Aryan nations of the West is due, as Mr. Senart shows, to the growth of strong political and national feelings; and it is the absence of such feelings in India which probably accounts not only for the continued existence, but occasional new creations of caste in this country.<sup>34</sup>

A survey of Assam, more with reference to its early history and languages, than to ethnology, was initiated by Sir Charles Lyall, K.C.S.I., in 1894, under the energetic direction of Mr. E. A. Gait, who in the previous year had published in the *Journal of our Society* an account of the Koch dynasty, which formerly ruled in Western Assam and the adjacent districts of Bengal. The immediate object was to make a search for originals or copies of the numerous manuscript *burāñjīs* or histories which were believed to be in existence; but incidentally copper-plate inscriptions, coins, and other old records were also brought to light. Several very important copper-plate grants, found in Gauhaṭi, Nowgong, and Bargāon, were made over to me by Mr. Gait to be deciphered. They have been published by me in our *Journal*,<sup>35</sup> and help to clear up to some extent the obscure history of Assam in the earlier middle ages. They show that there were three dynasties, probably succeeding one another,

<sup>34</sup> See a Review in the *Journal of the Royal Asiatic Society* for 1897, p. 192.

<sup>35</sup> See volumes LXVI and LXVII, for 1896 and 1897.



in the tenth and eleventh centuries A.D. The first two of these dynasties appear to have belonged to foreign invaders, and to have included, between them, twenty-two kings. One of the grants (of Nowgong) was issued by Balavarman, one of the members of the second foreign dynasty. The third dynasty was an indigenous one and bore the surname of Pāla. Two of its members, Ratnapāla and Indrapāla, the second and fourth of the series, are represented by the Bargāon and Gauhati grants.

The modern history of the Assam valley dates from the advent of the Āhōms, a Shan tribe who crossed the Patkoi and invaded Eastern Assam about the beginning of the thirteenth century, and who gradually extended their sway westwards over the whole of the Assam valley, which they continued to rule up to the time of the British occupation. It was the practice of the leading families and of the *deodhāis* or priests to maintain *burāñjis* or histories, which were handed down from father to son and were periodically brought up to date. Many of these records were destroyed by order of one of the Rājas who discovered that they contained adverse criticisms of his rule, and others were lost in the troubles which followed the incursion of the Burmese at the beginning of the present century. A considerable number, however, escaped. Some of these were examined by an Assamese gentleman, named Kācīnāth Tāmuli Phukan, who compiled from them a vernacular history of Āhōm rule which was published at Sibsāgar in 1844. The present enquiries have resulted in the discovery of a number of manuscripts in the possession of the representatives of old families and of some of the tribal *deodhāis* or priests, which add very considerably to the information recorded by Kācīnāth. These *burāñjis* are inscribed on oblong strips of bark of the tree *Aquilaria Agallocha*.<sup>36</sup> Those that belonged to old families were in the Assamese language, and were translated without difficulty. But those belonging to the *deodhāis* were in the old Āhōm language and character, the knowledge of which has almost died out and is now confined to a small number of elderly *deodhāis*. In order to obtain a translation of the latter a young Assamese was appointed to learn the language from the few *deodhāis* who can still speak it, and then with their aid to translate their *burāñjis*. This work has now nearly been completed, and when it has been brought to a close, the materials will be utilised for the compilation of a complete history of Āhōm rule.

A search has also been made for inscriptions of the Āhōm kings on temples, cannon and copper-plates, and for coins issued from their mints.

<sup>36</sup> For a description of the method of preparing the bark, see Mr. Gait's paper entitled "An abstract of the contents of one of the Āhōm *puṭhīs*" published in our *Journal*, Vol. LXIII, Pt. I, p. 108.

In all 28 temple inscriptions, 6 inscriptions on cannon, 48 copper-plates and 69 coins have been found and examined, the earliest of which dates from 1544 A.D. The information obtained from these sources has been utilised for checking the information recorded by Kāgināth; and so far as they go, the result has been to confirm the accuracy of his chronology in a remarkable degree. The majority of the coins collected were in the Sanskrit language and Nāgarī character, but some of them were in the Āhōm language and character. These latter, which have long been a puzzle to numismatists, were deciphered by the Āhōm translator, and the readings were published by Mr. Gait, in 1895, in our *Journal*, together with information on the Āhōm system of chronology. In the same volume of our *Journal*, Mr. Gait also gave some account of the coinage of the Koch kings.<sup>87</sup>

Previous to these enquiries, very little was known of the history of the Rājas of Jaintiā who ruled over the Jaintiā Hills and the portion of the Sylhet district which lies to the North of the Surma river. Some traditions regarding these kings have been collected, and ten coins and five copper plates have been found, which prove the accuracy of a traditional list of twenty kings, so far as the last fourteen names in it are concerned, and furnish materials for forming a fairly accurate estimate of the dates when they ruled. The results arrived at were published by Mr. Gait in 1895 in our *Journal*.<sup>89</sup>

The state chronicles of the kings of Manipur have been translated under the order of Colonel H. St. P. Maxwell, C. S. I., the Political Agent and Superintendent of the State. The chronicles professedly commence with the birth of the first king of Manipur in 334 A.D., but cannot be relied on for a narrative of actual fact until the early part of the fifteenth century.

In addition to the above, a number of manuscripts containing traditions of old rulers, legends and mythology, have been collected and translated, and a list has been prepared of all known books and papers bearing on the history, ethnology, &c., of the Assam Province.<sup>89</sup>

Since the publication in 1880 of my *Comparative Grammar of the Gaudian Languages*, no material progress has been made in our general knowledge of the Sanskritic languages of Northern India. In some points of detail, however, there has been a considerable advance, and this has been almost wholly due to the researches of my colleague in these studies, Dr. G. A. Grierson, C.I.E. They principally concern the

<sup>87</sup> See our *Journal*, Vol. LXIV, pp. 237 and 286.

<sup>88</sup> See Vol. LXIV, p. 242.

<sup>89</sup> The account of the Assam Survey is based on a note kindly supplied by Mr. Gait.

grammars of the Kāṣmīrī language and of the dialects of Bihār and the Panjāb, and are too technical to be of general interest. Those whom it may interest, I must refer to Dr. Grierson's learned essays published in our Journal.<sup>40</sup>

We may, however, now look forward to a great advance over the whole field of the North-Indian vernaculars, as the result of the Linguistic Survey which is at present proceeding under the direction of Dr. G. A. Grierson. That scholar first mooted the idea of such a survey before the International Congress of Orientalists held in Vienna in 1886. As a result a vote was passed by the Congress urging on the Government of India the importance of preparing a detailed survey of the languages and dialects spoken in this country. The suggestion was favourably entertained by the Government of India, but, owing to various causes, it could not be given effect to for some years, and then only in a modified form. The scheme which was ultimately approved of, and which since 1895 is in operation, comprises the following points. First of all, a rough unscientific catalogue is being made of every known language spoken throughout India, excluding Burmah and the Madras Presidency. The examination of the languages spoken in these two provinces is left to a future opportunity. The area to be investigated, therefore, consists of the Panjāb, the North-West Provinces and Oudh, the Lower Provinces of Bengal and Assam, the Presidency of Bombay, the Central Provinces, and Rājputāna. Attempts will also be made to investigate, as far as possible, the languages of Kashmir and the Himalayan States along the North of Hindustan. This large area includes practically the whole of the Aryan-speaking population of India, besides the languages of hundreds of aboriginal tribes speaking Muṇḍā and Tibeto-Burman languages. These rough lists are compiled from returns supplied by local officers. Each District Official and, in the case of Independent States, each Political Officer was given a printed form which he was requested to fill up, naming every dialect and form of language, under the appellation by which it is locally known, spoken in the tract under his charge. All these forms have already been received back from the local officers, and the Rough List is in active course of preparation.

<sup>40</sup> See his *Essays On Bihārī declension*, Vol. LII, 1883; *Grammar of Chhattisgarhī*, Vol. LIX, 1890; *Specimen and Analysis of Padmāvati*, Vol. LXII, 1893; *Pronominal suffixes in Kāṣmīrī*, and *Radical and Participial Tenses of the Modern Indo-Aryan Languages*, Vol. LXIV, 1895; *Irregular Causal Verbs* ibidem, *Kāṣmīrī Vowels System*, and a *List of Kāṣmīrī Verbs*, Vol. LXV, 1896; *Kāṣmīrī Consonantal System*, Vol. LXVI, 1897. See also his *Seven Grammars of the Bihārī Language* published in 1883-1887, and the Rev. T. Bomford's essays on Western Pañjābī in Vols. LXIV and LXVI of our *Journal*.

The lists for the Lower Provinces of Bengal, comprising Bengal Proper, Bihar and Orissa, for the Central and North-West Provinces and Oudh and for the Panjāb are complete and in the Press, while those for Rājputānā and Assam are nearly ready, but have not yet been sent to Press.

Dr. Grierson has been good enough to permit me to inspect advanced proofs of those portions which are in the Press. I am thus in a position to explain the composition of the two parts of the Rough List. In the first part, languages are arranged according to local areas. Each local area, or district, is taken in order, and each language spoken in it, together with the estimated number of speakers, is stated, family by family, as it occurs. Languages, indigenous to the district and those spoken in it by non-domiciled immigrants, are distinguished by a difference in the printed type. The second part is like a reversing dictionary. Here languages are arranged according to families and groups, and under each dialect is recorded the name of each local area in which it is spoken. Here too a difference in the arrangement indicates the localities of the dialects spoken by the settled and the immigrant populations.

These lists are being prepared with as great regard for accuracy as is possible, but they have the defects of their origin. The original returns have been prepared by persons with local knowledge, but who do not pretend to be philologists. They may be taken as representing what intelligent local people consider to be the languages of their own neighbourhood. They give names, but they are names only. We are told, for example, that Bangālī is spoken in such and such a place, but we are not told what is meant by the word "Bangālī." It is probably the language which Europeans call Bengali, but it may be something else. In the Central Provinces many thousands of Gonds have abandoned their ancestral language, and now speak a barbarous Hindi. In many cases this has been returned by local officers as Gondi, and it will be necessary, therefore, to test every entry regarding that language, in order to see whether the language referred to belongs to the Dravidian or to the Aryan family of speech.

The decision of these and similar questions is one for linguistic experts, and it is to provide experts with materials for coming to a decision, and thus to render the survey complete and of scientific value, that the second portion of the scheme has been devised and, it is hoped, will be approved of by the Government of India. As soon as the rough list of a Province is complete, translations into every language, indigenous to each district, will be called for from each local officer. One standard passage has been selected for these translations, namely the

Parable of the Prodigal Son. As these translations will in many cases be made by persons who do not know English, a collection of some sixty-five specimen translations of the parable into various Indian languages has been prepared. It is probable that the person selected to translate in each case will be acquainted with at least one of the languages of which a specimen is given. But as every translation will probably be more or less stiff, efforts will be made to procure at the same time an original folktale, song, or other naturally spoken sample of the language. When all these translations have been collected, they will have to be examined, and with their aid each language mentioned in the rough lists will have to be classified under its proper name and family. It is to be hoped that these translations, or at least selected specimens of them, may be published; for if properly edited, they will form a valuable collection of evidence as to the actual linguistic condition of India. When once the rough lists have been corrected and the translations published, we shall for the first time be able to say what languages are spoken in Northern India, and how many people speak in each. We shall also, incidentally, acquire a complete collection of specimens of all the written characters used in that country.

It is obvious that the second part of the survey which is yet to be made is the far more important of the two. In fact, the first part, by itself, with all its unverified statements, has no practical value, certainly none of any scientific character. Its value lies solely in the fact of its furnishing the basis for the scientific survey. It is, therefore, much to be hoped that nothing may occur to stop the survey at the stage which it has now reached, but that the Government of India may place Dr. Grierson in such a position as will enable him now to devote his whole time to the prosecution of the remaining scientific part of the survey, for which he is exceptionally well fitted, and thus to bring to a successful end the great undertaking which he has initiated, and which will reflect so much credit on the Government of India.

It must be remembered that such a linguistic survey, in addition to its own proper purpose, is most valuable on account of the fresh light it throws on unsettled points of history and ethnography. Thus there is the tribe of Abhirs or Ahirs, well-known in ancient Indian history. Its identity and habitat has always been a very vexed question. The linguistic survey, at last, has supplied the answer. It has brought to light the Ahirvāṭi or Ahirvālī, a dialect of Western Hindi, which is spoken in the district of Gurgāon and the neighbouring native states by as many as 300,000 people, a large number of whom are still Ahirs. These Ahirs of Gurgāon are an important tribe, from whom anciently their country took the Sanskrit name of *Abhīraṇṛita*;

and this, in its turn, in a corrupted form, has given its name to their dialect of *Ahīrvāli*.<sup>41</sup> I may give another instance. The last census gives only 4,500 *Kōches* in Bengal. The *Kōches* are a strong Tibeto-Burman race, which certainly once occupied a large portion of Bengal proper. Now the linguistic survey has discovered 217,500 more of these *Kōches* who live in the North-Central Districts of *Rājshāhi*, *Purnea* and *Malda*. This illustrates how important it is to go on with the survey, and not to stop it in its present half-finished condition.

I have already remarked that we may fully expect the results of the Linguistic Survey to lead to great advances of our knowledge of the history, the inter-relation, and distribution of the languages of Northern India. In order to show what we may expect in this direction, I cannot do better than communicate to you the substance of a note which Dr. Grierson has been good enough to place in my hands.

The extensive studies which I made of the North Indian vernaculars, when I was preparing my *Comparative Grammar of the Gaudian Languages*, had led me to the conclusion set out in the Introduction to that Grammar, that there must have been two consecutive Aryan invasions of India, and that the second set of invaders entered the domains of the first "like a wedge." Dr. Grierson informs me that all his studies, subsequent to that publication, have confirmed, in a most striking way, my theory, which even then was not an altogether new suggestion. He is of opinion that it will ultimately be shown that there are much plainer signs of this double invasion in ancient Indian Literature, than has hitherto been supposed. Thus he believes it can be shown that the war between *Viçvāmītra* and *Vaçiṣṭha* was a war between these two tribes, in which *Vaçiṣṭha* represents the first comers, and *Viçvāmītra* represents their new-come rivals, who had settled on the *Sarasvatī*, and had already driven the older tribe, partly to the East to beyond the *Gaṇḍak* and into *Magadha*, partly South into the *Pañcāla* country, and partly West to the banks of the *Indus*, where *Sudās*, *Vaçiṣṭha*'s master, lived. He further believes that the *Kuru-Pañcāla* war of the *Mahābhārata* was in its essence a struggle between these two tribes, the *Kurus* representing the new-comers and the *Pañcālas* the old ones; and that if this theory is borne in mind in reading the *Vaçiṣṭha-Viçvāmītra* hymns of the *Rg-vēda* and the *Mahābhārata*, and if a proper study is made of the geography of the period and of the tribes mentioned and the sides they took, it will receive remarkable confirmation.

<sup>41</sup> Mr. V. A. Smith, in the *Journal of the Royal Asiatic Society* for 1897, p. 891, following Sir A. Cunningham, places the *Ahīrs* further south, between *Jhansī* and *Bhilsā* in the *Gwāliyar* State.

From the point of view of linguistics Dr. Grierson, in his note, shows that many new facts have come to light confirming my original theory. For instance, there is his discovery of the North-Western family, which completes the "wedge" theory. Then dividing the Aryan languages of India into two main families, a Central and a Non-Central, he shows that there is a remarkable series of opposed linguistic facts in the two. The Central family represents the new comers; the non-Central represents the first comers. Thus, the Central family is in the main a set of languages which are in the analytic stage. The original inflections have in the main disappeared, and grammatical needs are supplied by the addition of auxiliary words which have not yet become a part of the main words to which they are attached. Examples are the genitive suffix *ka* and the auxiliary verbs. Languages of the non-Central family have gone a stage further in linguistic evolution. They were once, in their Sanskrit form, synthetic; then they passed through an analytic stage—some are only passing out of that stage now, and are, like Kāçmiri, so to speak, caught in the act—, and are again become synthetic, by the incorporation of the auxiliary words, used in the analytic stage, with the main words to which they were originally attached. Examples are genitive terminations like the Bangālī *ēr*, or verbal terminations like the Bangālī *ām*.

Then, again, Dr. Grierson points out that the non-Central languages evidently used enclitic pronouns from the first. Hence we find them using pronominal suffixes freely, all using them for verbs, and some for nouns. In the Central languages, on the contrary, pronominal suffixes are, so far as he is at present aware, unknown.

In pronunciation also, he shows, that the two main families are sharply opposed. It is hardly necessary to dwell on the well-known preference of the Central languages for *ā*-sounds, and of the other languages for *ē*-sounds. This is as old as the Açōka inscriptions. There are other preferences to which it is quite unnecessary to refer: they will at once occur to every philologist. A very remarkable difference is the treatment of the sibilants. The Central family hardens them: every sibilant is pronounced as a hard dental *s*. The non-Central languages seem unable to pronounce an *s* clearly. In the extreme west, the Greeks found *s* pronounced like *h*; and in the east, the Prākṛit grammarians found it softened to a *śh* sound, which they represented by *ç*. At the present day we find the same shibboleth a test of nationality: in Bengal and part of Marāṭha *s* is weakened to *śh*, and in Eastern Bengal and Assam it is further weakened, till its pronunciation resembles that of a German *ch*, and again on the North-Western frontier and in Kāçmir, it has become an *h*, pure and simple.

The limits of these two main families Dr. Grierson defines as follows. The Central main family is bounded on the north by the Himālayas, on the west by, roughly speaking, the river Jhelam, and on the east by the Kōsi. The western and eastern boundaries are very wide, and include a good deal of debatable ground in which the two main families meet and overlap. If these limits are narrowed so as to include only the pure languages of the Central main family, the western boundary must be placed at about the meridian of Sirhind in Patialā,<sup>42</sup> and the eastern at about the meridian of Allahabad in the North-Western Provinces. The southern boundary is well defined. It runs east and west through a point about two-thirds of the way across the Central Provinces. On the west, the Central main family merges into Sindhī through Marwāri and Bāgrī, into what Mr. Bomford names "Western Pañjābī" through Pañjābī, and into Kācīrī through Gujarī, Dōgrī, and other hill languages, so that the area covered closely corresponds with that of the ancient *madhya dēśa* or Middle Country, the name of which is significant. We learn from the Mahābhārata that Kṛṣṇa, being defeated by Jarāsaṁdha of Magadha, fled from Mathurā to Gujarāt, where he founded a colony. At the present day Gujarāt is the only place where the Central main family has burst through the surrounding wall of non-Central languages. The language is a pure Central one. Pañjābī contains many unrecorded forms, for which the only explanation is that to the west of Sirhind, or, we may say, to the west of the Sarasvatī, the country was originally inhabited by tribes belonging to the non-Central family, who were conquered or absorbed by members of the Central family, whose language gradually superseded theirs just as Hindūstānī is now gradually superseding Pañjābī. Pañjābī is a Central language, but it contains many forms which can only have survived (if they were not imported) from an original non-Central dialect.

On the eastern side, the wider boundary includes Bihārī. Most of the Bihār dialects probably belong to the non-Central main family. Hitherto they have been grouped with languages like Avadhī and Baisvārī, which also probably belong to the Central main family. Provisionally, till the linguistic survey is complete, Dr. Grierson is inclined to class the true Bihārī dialects, viz., Pūrbī, Bhojpurī, Maithilī, and Māgadhī, as non-Central languages, belonging, like Bangālī, to the Eastern group, and Baisvārī and Avadhī and others as an Eastern group of the Central family.

<sup>42</sup> Sirhind also means the head of Hindustan, and is still the recognised race-boundary point.



Thus Dr. Grierson arrives at the following classification of the languages of Northern India.

Central Family.

West-Central Group.	{	Western Hindī (including Urdū, Braj Bhāṣā, Rōhilkhaṇḍī, and the language of the Upper Doāb, called Pachāḍī).
		Bundēlkhaṇḍī.
		Rājasthānī (including Mārvarī, Mōvārī, Bāgrī and Mālvi <sup>43</sup> ).
		Gujarāṭī.
East-Central Group.	{	Pañjābī.
		Eastern Hindī (including Baisvārī and Avadhī).
		Baghēlkhaṇḍī.
Northern Group. <sup>45</sup>	{	Chattisgarhī. <sup>44</sup>
		Western Pahārī (including Kuluhī, Sirmurī and other connected dialects).
		Central Pahārī (including Garhvālī, Jaunsārī, and Kumaunī).
		Eastern Pahārī (also known as Naipālī, Khas or Parbatīā).

The Classification of the Non-Central family is simple.

North-Western Group.	{	Sindhī.
		Western Pañjābī.
		Kāṣmīrī.
South-Western Group.	{	Marāṭhī.
		Bihārī. <sup>46</sup>
Eastern Group.	{	Bangālī.
		Assamese.
		Oriyā.

**History of Old Calcutta.**—The last subject on which I propose to touch in my address is one which concerns us "Calcuttaites" more nearly. It is the history of old Calcutta.

<sup>43</sup> The last may, perhaps, have ultimately to be classed as a separate language, or, perhaps, as a dialect of Bundēlkhaṇḍī.

<sup>44</sup> Possibly Chattisgarhī should come under the non-Central Family. Its classification under the Central Family is provisional.

<sup>45</sup> The language-names of this group are taken from the Census Report of 1891. The nomenclature is Mr. Baynes.

<sup>46</sup> In the rough lists of the Linguistic Survey, Bihārī is included in the East-Central Group. This is only provisional.

The origin of this city of ours has been the subject of investigation of two members of the Society, Bābū Gaur Das Bysack and Mr. C. R. Wilson. The former published a very interesting paper on the subject in 1891, in the *Calcutta Review*,<sup>47</sup> and the latter has given us an account of his researches in a separate volume on the *Early Annals of the English in Bengal*, published in 1895.<sup>48</sup> The results of their investigations may be summarised as follows.

Down to the commencement of the sixteenth century Sātḡāon was the centre of commerce in Lower Bengal. That town lay on the river Sarasvati, near its junction with the Hūgli, a little to the north of the modern town of Hūgli. Early in the sixteenth century the Sarasvati began to silt up; and in order to better meet the commerce with Europe, which then began to spring up, the native traders began to move down the river Hūgli, in consequence of which movement Sātḡāon was deserted and sank into the obscurity of an insignificant group of huts.<sup>49</sup> Among those who deserted Sātḡāon were one Sett and four Bysack families. They settled on the Hūgli at a place which they named Govindpur after their tutelary deity Govindji, and which stood on the site of the present Fort William and its Esplanade. At the same time they established a place of business a little higher up the river, as a mart for the sale of skeins of thread and woven cloth. It was hence called the Sūtānuṭi Hāṭ or "the Cotton-bale Market," or in its English form Chuttanutti.<sup>50</sup> This place corresponds to the northern native quarter of the present city.

The immigration of the Setts and Bysacks occurred not long before 1530, in which year the first Portuguese ship sailed up the river Hūgli, and traded with them. The first settlement of the English in these parts took place in 1651, in which year the Company established its headquarters in Hūgli, near the now decaying town of Sātḡāon. In 1686, however, they found themselves obliged to abandon it, and withdrew to the island of Hijili at the mouth of the Hūgli. On his way down the Hūgli, Job Charnock, who was in command of the Company's servants, halted for a few weeks at the Sett and Bysack settlement at Sūtānuṭi. In the following year, having failed to establish himself in Hijili, he returned to Sūtānuṭi, where he maintained

<sup>47</sup> See Article V, in No. CLXXXIV, p. 305, entitled "Kalighat and Calcutta."

<sup>48</sup> The "Introductory Account" is based mainly on the late Sir Henry Yule's edition of the *Diary of William Hedges, Esq.*, Vol. II, 1888.

<sup>49</sup> See Blochmann's account of Sātḡāon in our *Journal*, Vol. XXXIX, p. 281.

<sup>50</sup> Pronounced Shuttanutti, as in Portuguese, whence the transliteration is borrowed. See Wilson's *Early Annals*, p. 135, note 2. The name is found variously spelled: Chuttnauttee, Chuttanuttea, Chuttanutti, etc.; also Soota-Nutty.

himself for about one year, from September 1687 to November 1688; but ultimately, after an abortive attempt at Chittagong in 1689, he had to withdraw to Madras. From here he was recalled by the emperor Aurangzib, and in August 1690 came back for the third time to Sūtānuṭī, where he established the Company once more at the place they had occupied in 1688. This was just below the settlement of the Setts and Bysacks, and above their settlement at Govindpur, at a small village, called Kalikātā, or in English Calcutta, on the site of the present European commercial quarter and the Baṛā Bazār. Here the English traders lived at first as best they could in tents, huts and boats; but very soon "as the result of conciliating the Nawāb of Bengal's representatives, and of winning general confidence, Armenian and Portuguese merchants were attracted by the English, and as success followed industry, the settlement extended itself southward along the river's bank, bringing into the sphere of occupation the contiguous villages of Calcutta and Govindpur. When in course of a little time further a factory grew into existence, the Company's servants, who had learned the necessity of possessing some central stronghold, obtained permission, in 1696, from the Nawāb's Government to surround it with defensive fortifications."<sup>51</sup> This was the old Fort William which stood on the site now comprised between Koilaghāt Street and Fairlie Place. Two years later, in 1698, through the indulgence of Prince 'Aẓīmu-sh-Shān, the grandson of the emperor Aurangzib, they secured the leasehold rights of the three villages of "Chhattanuttee, Calcutta and Govindpur," which henceforth formed one united settlement. Thirteen years later, in 1717, they obtained from the emperor Farrukhsiyar a further grant of 38 villages, out of which several were added to the three villages already amalgamated. Afterwards others were, from time to time, brought within the bounds of the settlement, till at last these combined localities formed the city of Calcutta almost as it now is. "The designation of Calcutta is now applied not only to our city which has for its component parts many old villages with histories of their own, but to a Parganah which comprehends the city and many villages at various distances from it; and this Parganah again is one of several which pass under the name of the District of the 24 Parganahs."<sup>52</sup>

The name of "Calcutta," in its English form, first occurs in two Reports submitted in March 1689, by Captain Heath and Job Charnock to the Company's Council in Madras, and refers to the second settlement of the English near Sūtānuṭī in 1688.<sup>53</sup> When they returned for

<sup>51</sup> See Dr. Busteed's *Echoes from Old Calcutta* (3rd edition), p. 3.

<sup>52</sup> See Baboo G. D. Bysack's paper, p. 320.

<sup>53</sup> See *Hodges' Diaries*, edited by Colonel Sir H. Yule, pp. lxxix and lxxxi.

the third time to Sūtānuṭī, they again settled on the lands of the "Calcutta" village; but the official designation of the settlement appears to have been "Chuttanuttee," for the "diaries" are dated from there. How the change of name originated and the little village of Kalikātā came to give its name to the city of Calcutta is not yet fully accounted for. It seems to me that the change explains itself in this wise. The early diaries of the English Settlement between 1688 and 1698 are all called "Chuttanuttee Diaries." These diaries always run from the December of the preceding year to the November of the following year. The diary for 1699, that is to say, for December 1698 to November 1699, is the first dated from Calcutta; for I find that the diary for 1704-5 is called the seventh from Calcutta.<sup>54</sup> It follows that the change of name, from Chuttanuttee to Calcutta, must have taken place shortly before December 1698. Now in July 1698, the Company became the revenue collector, for the Moghul Government, of the three villages Sūtānuṭī, Calcutta, and Govindpur. In the Āin-i-Akbarī, the village of Kalikātā (Calcutta) is enumerated as one of the *mahals* or revenue subdivisions of the District of Sātgaon.<sup>55</sup> As such it belongs to the fiscal survey, made in 1587, by Todar Mall, the well-known Finance Minister of the emperor Akbar. The villages of Sūtānuṭī and Govindpur, founded shortly before, in 1530, are not mentioned in the fiscal survey; they evidently lay within the fiscal subdivision of Calcutta. It is natural to conclude that when the English Company acquired the collectorate of that subdivision in 1698, they made its old and well-known fiscal name the official designation of their settlement, especially as their factory and fort lay within the limits of the village of Kalikātā.

For the very early age of that village a curious piece of evidence was discovered in 1892, by Mahāmahōpādhyaya Pandit Hara Prasād Shāstri.<sup>56</sup> He found in an old manuscript an account of a voyage down the river Hūgli, written in 1495 by a Bangālī author named Bipra Dās. That writer enumerates all the towns and villages which the voyager, a certain Cānd Sadāgar, passed on both sides of the river. Among them occurs the village of Kalikātā, but neither Sūtānuṭī, nor Govind-

<sup>54</sup> See Wilson's *Early Annals*, p. 236, where it is called *Calcutta Diary No. 7*. The full name of the Calcutta diaries was *Diary and Consultation Book of the London Company's Council at Fort William in Bengal*. This is accounted for by the fact that the Old Fort was completed in 1697, just before the change of name took place.

<sup>55</sup> See Colonel Jarrett's Translation, Vol. II, p. 140. The Āin-i-Akbarī was completed by Abul Faḥl in 1597. See also Mr. J. Beames' paper in the *Journal*, Royal Asiatic Society, for 1896, p. 102.

<sup>56</sup> See his paper in our *Proceedings* for 1892, p. 193.

pur, which circumstance shows that while Kalikātā existed in 1495, the other two villages did not.

The idea still much entertained that Calcutta has received its name from the celebrated shrine of Kālighāt on the "Old Ganges," is altogether wrong. Not to mention the philological difficulties which are fatal to the identification of *Kalikātā* with *Kālighaṭṭa*, their identity is totally precluded by the fact that in 1495 both localities were in existence and occupied the same, or nearly the same, places as they do now. Bipra Dās's voyager, having come by the town of Hūgli and other places, passed the village of Kalikātā, and journeying on reached Bētōr, near the modern Shibpur, and thence he went on to Kālighāt, where he worshipped at the shrine of Kālīkā. The fact is that the derivation of Calcutta from Kālighāt is one of the many utterly unfounded popular etymologies. Its real derivation is still quite unknown. The probability is that it is a word from some aboriginal language: and this would be only one more evidence pointing to a considerable antiquity for the site of Calcutta.

With regard to the origin of the Kālighāt shrine, I may add that according to a current tradition it was founded, early in the fifteenth century, by an ascetic called Jangal Gir Chaurangī. "One evening he was performing his devotions by the bank of the "Old Ganges" which was then a great stream flowing south of Calcutta, when suddenly a bright light shone round about him, and that same night, when he had gone to sleep, the goddess Kālī appeared to him in a dream, and told him that the spot was one of those holy places which had once received a portion of her severed body. The next day he dug up the ground, and proved the truth of his vision. The sacred emblems thus miraculously found, being the toes of her right foot, were set up for worship in a small wooden house on the bank of the Ādi-Gangā."<sup>57</sup> From the original founder of this wooden shrine, our well-known fashionable quarter, now known as Chowringhee, but which at that time was a wild jungal, is supposed to have obtained its name. The present substantial temple was erected in 1809 by the Sāvarṇa Chaudharis of Behālā.

The story of the Black Hole, as you know, is intimately connected with the Old Fort William, which as I have already remarked, was built in 1696-97. At the time of that tragedy, in 1756, Calcutta "extended in a crescent along the bank of the river from north to south for about three miles (say from modern Chitpur Bridge to the site of the present Fort). Standing nearly midway between those limits was the little Old Fort. The houses of the English inhabitants were scattered in

<sup>57</sup> See Wilson's *Early Annals*, pp. 129, 130.

large enclosures for about half a mile to the north and south of the Fort, and for about a quarter of a mile to the east of it. Beyond the English houses were closely clustered the habitations and huts of the natives; the better classes of them, such as the Setts and Bysacks, dwelt to the north, the lower sort in the Bazars to the east and south."<sup>58</sup> The story of the tragedy of the Black Hole is well-known, and I need not repeat it, but till the commencement of the period I am now reviewing its exact site was very imperfectly known. For the exact determination of it we are indebted to two members of our Society, Messrs. R. R. Bayne and C. R. Wilson. The results of their investigations are published in our Journal,<sup>59</sup> and may be thus summarised. In 1880, when the new East India Railway Offices were being erected in Clive Street, the excavation made for the foundation of these Offices laid bare the remains of an old wall. Mr. Bayne, who was in charge of the works, knowing that he was working on the locality of the Old Fort William, at once resolved to utilize as well as he could the opportunity of determining its topography. In February 1883, he laid before the Asiatic Society the results of his investigations. Unfortunately they suffered under two disadvantages. In the first place, the portions of the old building actually excavated were on the northern and least interesting side of the Fort. In the second place, Mr. Bayne had no proper plan to guide him in his conjectures as to the position and nature of the remaining portions of the Fort. When Mr. Wilson resumed the investigations in 1891, he could do so under far more favourable conditions owing to the erection of the New Government Offices in Dalhousie Square. He also had the advantage of being guided in his excavations by a detailed plan of Fort William in 1753, a photographed copy of which was presented to the Society by Mr. T. R. Munro. He thus succeeded in discovering considerable remains of the buildings on the south side of the Fort, where the Black Hole and other places of interest had been situated. In fact, his investigations were so successful that it was found possible to draw up a plan of the Old Fort, accurately showing its position with reference to the modern houses now standing on or near its site, together with the main features of its principal buildings. He first discovered the true dimensions and position of the east gate of the Fort. The gate was found to be much smaller than Mr. Bayne had conjectured it would be. Its centre lay on the central line of the road in front of Writers' Buildings, which has always been one of the principal streets of the city. In the next place, Mr. Wilson traced out, as far

<sup>58</sup> See Dr. Busteed's *Echoes of Old Calcutta*, p. 5.

<sup>59</sup> See Volume LII, p. 105, and Vol. LXII, p. 104.

as was possible, the main features of the factory within the Fort, in which were situated the apartments of the Governor. This was in its day one of the finest English houses in India. It consisted of a main building facing the river, with two wings behind at right angles to the main building. Almost all the foundation walls of these wings were traced out by excavations, and the position of the walls of the main building was ascertained, although the walls themselves could not be traced out, as the site of the main building is at present occupied by the Government Opium Godowns and by the out-houses of the Custom House. Mr. Wilson also endeavoured as far as possible to ascertain the position of the south curtain, of the south-east bastion, and of that portion of the east curtain which lay between the south-east bastion and the east gate, together with the adjoining arcades and chambers. Considerable difficulty was experienced by him in coming to any definite conclusion on these points; for, in the first place, the Post Office covers the site of the south-east bastion and the adjacent south curtain wall, and so prevents any extended excavations in this region; and in the second place, the plan of the old Fort, which has elsewhere proved to be extremely accurate, seems at this point to fail. Still, in spite of these difficulties, Mr. Wilson was able to definitely fix the position of the south curtain wall and of three parallel lines of arches within it, and to show that tradition was right in asserting that the old arcade and arches which still stand in the Post Office compound were part of the old Fort. The arches of the south face of this arcade are what remains of the first line of arches within the south curtain, and the arches in the middle of the arcade are what remain of the second line of arches. The foundation wall of the third and innermost line of arches was traced out for some distance. It was found in the passage on the north of the Post Office. Starting from this wall, or, what is practically the same thing, from the north face of the Post Office, Mr. Wilson traced out the east curtain wall as far as the east gate, the inner wall containing the chambers built against the curtain, and the wall of the piazza or veranda running west of the chambers. The Black Hole prison was one of these chambers; but to fix its exact position it would have been necessary to ascertain, not merely the positions of the curtain wall and the inner wall, which formed its eastern and western walls, but also the position of the cross-walls which formed its northern and southern boundaries, and divided it off from the other chambers built against the east curtain. Unfortunately these cross-walls were run up with hardly any foundation, and hence it was found extremely difficult to trace their position. One such cross-wall was found at a distance of about 100 ft. from the centre of

the east gate, and to the south of this there is another cross-wall which Mr. Bayne discovered in 1883, and which according to his theories must have been the north wall of the prison. According to Mr. Wilson this cannot have been the case; because the space south of this cross-wall is shown by the plan of the Fort to have been occupied by the foot of the staircase leading to the south-east bastion, but he thinks it quite possible that it is the south wall of the prison. Concerning this and other points in the topography of the Fort additional information may perhaps be obtained hereafter by further excavations and by the examination of old records.<sup>60</sup>

The history of the Company's Ecclesiastical Establishment in Bengal from its foundation in 1677 to the close of the eighteenth century has been explored by another member of our Society, the Rev. H. B. Hyde, and published in a series of ten short memoirs. The materials for these researches previous to the sack of Calcutta in 1756 were found almost wholly in the Company's archives at Westminster. Subsequent to that date a parallel series exists in the Vestry Records of St. John's Church, in the 'Ecclesiastical' records of the old Mayor's Court of Calcutta, and in the Consultations of the Public and Military Departments of the Bengal Government. The first Chaplain of 'the Bay,' John Evans, had a remarkable career which ended in the Irish Bishopric of Meath. This Mr. Evans was Chaplain of 'the Bay' at the time of the founding of Calcutta. His successors Benjamin Adams and William Anderson promoted the building of the first Presidency Church. This occupied a site now covered by the west end of Writers' Buildings and, as shown by the consecration documents which have been found in the Bishop of London's Registry, was dedicated on the 5th of June, 1709, to St. Anne, doubtless with complimentary reference to the name of the reigning sovereign. Specimens of the sermons of Mr. Anderson have been found in the British Museum; they curiously illustrate the disorderly state of the factory at that period. The next three Chaplains in succession filled the fifteen years previous to 1726, counting four intervals of two or three years each occasioned by Chaplains' deaths. The tomb of one of these victims of the climate is in the Dacca cemetery. During these fifteen years the project which resulted in the foundation of the Calcutta Charity School (now united with the Free School) was set afoot. The Parish Register of St. Anne's has been found in duplicate at the India Office, and the whole of it, from 1713 until the destruction of the Church by the Nawāb's army in 1756, has been transcribed and added to the Records of St.

<sup>60</sup> See the Annual Address in our *Proceedings* for 1892.



John's Church. In 1726 arrived a Chaplain who was destined to set the climate for 30 years at defiance, and then to perish not by any Indian sickness but by suffocation in the Black Hole; his name was Gervase Bellamy. He saw the old Court House, which occupied the site of the present St. Andrew's Kirk, built in about 1729. The building was first intended as a school house, but soon gave shelter to the Mayor's Court, and became the Calcutta Town Hall. Eventually Government took it over and still pay over the monthly rent of 800 sicca rupees on account of it to the Select Vestry of St. John's and the other Governors of the Free School. Bellamy witnessed also the furious cyclone of 1737, which, it appears, was not accompanied by an earthquake as is generally supposed, but in which the tall spire of St. Anne's was blown off. The traditions of this celebrated storm, as Mr. Hyde has shown, are much exaggerated. In 1743, Bellamy received a junior colleague in the Chaplaincy, the third successor of whom was Robert Maplettoft, who arrived in 1749. In the siege of 1756, this man was appointed a Captain-Lieutenant, and did good work on the defences. He perished among the refugees at Fulta, while Bellamy was found lying suffocated hand in hand with his son in the Black Hole. On the recovery of Calcutta from the Nawāb Sirāju-d-daulah, the first incumbent of the Chaplaincy was Richard Cobbe, R.N., who had accompanied Admiral Watson to Calcutta. He died after a few months' service. During his brief incumbency the Portuguese Church in Moorgihatta was taken over for English use and remained the presidency church until 1760. Cobbe was succeeded by Butler who in 1758 welcomed into the settlement the celebrated S. P. C. K. Missionary John Zachary Kiernander. He survived to see St. John's Chapel built in the ruins of the old Fort in 1760. In January 1762, a month after his death, he was succeeded by Samuel Stavely, R.N., who died nine months later. His colleague, William Hirst, R.N., F.R.S., was one of the most accomplished men who ever belonged to the Bengal Ecclesiastical Establishment. A long communication of his, respecting the great earthquake of 1762 and also an eclipse of the sun in the same year, is to be found in the Transactions of the Royal Society. Following Hirst, William Parry succeeded as Senior Chaplain in 1765, and Thomas Yate in 1769. The latter had a singular experience in being taken prisoner by the French and confined on board a French frigate and at the Mauritius. In both situations he suffered horrible hardships, and in the latter imprisonment he even prayed "that one of the soldiers might be permitted to shoot him through the head." He survived all his misfortunes, however, and died as first Garrison Chaplain of Calcutta in 1782. William Johnson became Senior Presidency Chap-

lain in 1784, and to his efforts is due the building by public subscription of the present St. John's which was consecrated in 1787. On his retiring from India in 1788, Thomas Blanshard became Senior and John Owen, Junior Presidency Chaplain. Of the latter a large private correspondence has been discovered, dated mostly from Calcutta and is not a little curious. In 1788 the presidency chaplains in conjunction with David Brown, the Garrison Chaplain, and Robartes Carr, the Chaplain to the Fourth Brigade, made an admirable effort to secure Government English Schools for the native population. Their memorial to Government on the subject is printed by Mr. Hyde in one of his memoirs. Nothing came of it, and indeed it appears to have been quite overlooked even by writers on Education in British India. In this same year the Ecclesiastical Establishment which then comprised nine Chaplains was put on a new footing. Brigade Chaplaincies were abolished and Barrackpur, Dinapur, Chunār, Berhampur, Fathgarh, and Cawnpur became quasi-parishes, with resident incumbents. Mr. Hyde has traced out the succession of Chaplains in each appointment until the close of the century, and collected a great number of personal *notitiæ* respecting each of them, especially regarding David Brown, who eventually became Senior Presidency Chaplain. He has similarly compiled in much detail the history of the Charity and Free Schools down to the close of the century.

Writers differ much in accounting for the origin of the Charity School: none seem to fix the date of its beginning early enough. Mr. Hyde points out that its establishment was a cherished project of Chaplain Briercliffe and the Society for Promoting Christian knowledge in 1713, and that in 1720 the scheme after many checks was actually afoot and Chaplain Thomlinson bequeathed Rs. 80 towards it. Mr. Hyde thinks that the school had been in existence some time before 1732: perhaps 1729 is as near a conjecture as can be made as to the date of its beginning work. It was first supported out of the income of the "Charity Stock" of the Church. The origin of this property must be sought very early in the history of the Chaplaincy. There existed in Hügli, before the factory removed to Calcutta, an institution of "guardians of the poor," the funds of which arose from fines levied upon English officials of the factory who remained out late at night, who swore profanely, or who neglected attendance at divine worship. This institution seems to have disappeared in the dissolution of manners in the early years of the Calcutta factory, and local paupers had stipends from the Company's Cash. With the improvement of parochial organization on the consecration of the Church in 1709, such administration of charity passed, it is to be

presumed, naturally into the hands of the Select Vestry, with whom money must have slowly accumulated after the sacred building was finished and furnished; for all expenditure for repairs and establishment must have been borne by the Company, and Church Order required that alms should be collected at the Offertory for the benefit of the poor. The fund thus accumulating would have been augmented by legacies and donations, and it is known that the fees received for the use of palls at funerals went into it. The Charity Stock therefore must have been already of ancient origin, when its income became permanently devoted to the maintenance of the Charity School. In 1731, "an eminent merchant" (to be identified probably with Mr. Richard Bouchier) wrote home from Calcutta that there were eight boys on the foundation and about 40 others. The eight foundationers were "maintained and clothed after the manner of the Blue-coat boys at Christ's Hospital." After the sack of Calcutta the School was re-opened with 20 foundationers, and duplicate promissory notes for Rs. 20,000, representing the Charity Stock, were granted to "the Wardens of the Parish." Within a few years time the Court House (or rather the portion of it used for Magisterial purposes) was bringing in a rent of Rs. 2,000 a year. This in 1767 was increased to Rs. 4,160, and in 1776 to Rs. 6,180. Two years later the Government had taken over the whole building and fixed the rent at the rate still paid, *viz.*, Rs. 800 a month. Out of the revenues thus realized from the Charity Stock and the Court House 20 boys were at this time maintained on the foundation of the School. On leaving School the boys were for the most part bound out as apprentices. In 1787 there were 30 boy foundationers, and four girls. In 1789 there was 25 boys and 16 girls. In 1789 the Free School was founded which soon coalesced with the Charity School. In 1793 there were 40 boys and 30 girls on the 'Charity,' and slightly larger numbers on the "Free" foundation. In the same year the Jaun Bazar property was purchased which the United School now occupies. In 1800 the two institutions were formally united, and possessed a united capital of something over two lakhs of rupees "independent of dead stock and contingencies." Some dieting bills of this period remain, and are curious particularly as recording prices. 18 seers of milk, and 25 loaves of bread each were reckoned to the rupee, six sheep cost Rs. 7-6-0, and Rice Rs. 1-4-0 a maund. By 5th April 1813, 252 children were entirely maintained by the Free School, and about 32 day scholars were educated with the rest under Dr. Bell's system. By 1817 the number of foundationers had arisen to 205 boys and 92 girls.<sup>61</sup>

<sup>61</sup> The account of the Chaplaincy and the Charity School is from a note kindly supplied to me by Mr. Hyde.

And now, gentlemen, I offer you my sincere thanks for the honour you conferred on me last year in electing me your President. It will always remain one of my pleasantest recollections of India that I was permitted to close my career in this country with that distinction; and I have the additional satisfaction of knowing that in the Hon'ble H. H. Risley, C.I.E., I shall have a successor who is distinguished not only by his position in his own Service, but also by his achievements in scientific research.

# THE COORGS AND YERUVAS, AN ETHNOLOGICAL CONTRAST.

BY

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### I.—INTRODUCTION.

In the little province of Coorg, which embraces a semi-isolated portion of the Western Ghats, we have an interesting instance of the way in which a mountainous and jungle-covered country has been turned to totally different purposes by two distinct races. Like many of the aboriginal tribes of South India who have been compelled to retire to the unhealthy hills before the southward spread of the Aryans, the Yeruvās found in Coorg an asylum of refuge from the aggressive invaders. At a later period certainly, though precisely when is not known, the splendid race of *Koḍagas* (Coorgs) found in the jungles of Coorg the means for satisfying their hunting propensities, whilst the narrow passes to the surrounding lowlands suited their highly developed instincts for predatory excursions into the country of their wealthier but less warlike neighbours. Whilst to the Yeruva the little mountain province was a place of retreat, to the Koḍaga it was a Nature-made *point d'appui* for border raids, conducted with a view to supplementing the limited agricultural resources of the small plateau.

The sporting and fighting proclivities of the Coorgs reveal themselves even in their festive and religious ceremonies. From his very birth, when a bow-and-arrow made from the castor-oil plant is placed in the hands of the small baby-boy, the Coorg male is, or at least in the old days was, regarded as a huntsman and a warrior, whose first pride should be his size and physical strength. The selective influences arising from this have combined with many healthy habits to make the Coorgs the finest race, without exception, in South India. Gymnastic feats and skill in the use of arms form some part of nearly every festival in Coorg, and practically the whole of the rejoicings at the end

of the seed-time for the celebration of the *Kail mārta*, when, after incense is burned and offerings made to the household collection of weapons, an athletic meeting is held on the *ūru-mandu*, or village green, which serves every function of the old Roman forum.

Out of a total population of 173,055 at the time of the last census, the two largest castes peculiar to the province—the Coorgs and Yernvas—numbered 32,611 and 14,209 respectively.<sup>1</sup> It is with these two peculiar tribes that this note exclusively deals. The measurements herein recorded were made during the field season 1897-98, whilst I was in charge of the Geological Survey of the Province. For facilities afforded me for this purpose I have to thank in the first place, Mr. H. H. Risley, C.I.E., for the loan of a set of anthropometric instruments and literature on the subject, and Mr. G. F. Meiklejohn, Commissioner of Coorg, who directly or through his subordinates, removed the difficulties of prejudice and suspicion with which the native naturally views an official collection of data about his person and private property.<sup>2</sup> To Lieut.-Col. D. S. E. Bain, I.M.S., I am indebted for the means of measuring the few Coorg prisoners in the Mercara jail. The data obtained from these, it is not uninteresting to record, do not noticeably disturb the averages obtained by measurement of their more fortunate fellow-tribesmen who are living on the other side of the prison-walls and have not been noticed to exceed the "elastic limit" of the law.

Because of the differences of opinion now entertained with regard to the ethnic value of the different castes in India, I have, in this note, considered it necessary to make a short analysis of existing opinions, with a view to discovering what is essential and what is merely incidental in

<sup>1</sup> H. A. Stuart, Coorg Census Report, 1891, pp. 2 and 38. The coffee-planting industry of Coorg accounts for the very large number of male immigrant labourers, most of whom during the slack season return to the low countries. It is on account of this annual ebb and flow of males that such a disparity as 8:10 of females to males appears in the Census Report, as well as the excess of deaths over births. Because of the different periods of the year at which the returns were made the population of the province in 1891 appeared to be less by 2.94 per cent. than in 1881, whereas the Coorgs themselves had increased by 20.63 per cent. in the same period.

<sup>2</sup> The Yernvas conceived the plausible theory that the Chief Commissioner, having first made a tour through the country and convinced himself of the existence of able-bodied men, requested me to follow immediately for the purpose of ascertaining, by measurement, those who were fit for sacrifice on the N.-W. Frontier, where they said a certain number of men must be killed before the country could be quieted. Knowing the readiness of the Yeruva for flight and the fact that the impediments to his departure were, by his peculiar mode of life, always few, one had, out of regard for the hospitable coffee-planters, to be careful not to give cause for the propagation of such a ridiculous rumour.



the differences between the Indian tribes and castes. An attempt is made to show the value of recording individual measurements for analysis by the graphic method, instead of, or in addition to, the shorter, but less satisfactory, system of recording averages. The record of individual measurements permits of an examination of the degree of variation for each character, and affords a means for detecting any simultaneous variation of two or more physical characters, indicating roughly whether the race is a recent blend of dissimilar elements, or is comparatively pure. The present paper is thus to a limited degree an attempt to contribute some assistance towards the solution of the problem of discriminating physical characters which are deep-lying and of ethnical significance from those which are transient and variable amongst the Indian tribes.

I have confined myself purely to the physical characters of the tribes, and have not attempted to treat of their manners and customs, which I do not believe can be reliably studied by one imperfectly acquainted with the language and limited to a short stay in the country. Owing to the mutability of the language, customs and religion of a tribe, the evidence of such ethnographical details is a safe index to racial affinities only in the hands of an expert who is conscious of the many ways in which a new comer can be unwittingly deceived by superficial observations. As many of the notes which I have made concerning the ethnography of the Coorgs and Yerusas are in general mere verifications of the previously published accounts of the tribes by Moegling, Richter and others, their publication in this note would be of no scientific value. A record of these will probably be included in the forthcoming Census Report.

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## II.—THE ETHNIC VALUE OF CASTE.

The Rev. G. Richter<sup>3</sup> has given great offence to many Coorgs by classing them with the Dravidian tribes around and refusing to regard them as "Aryan Hindus." He states that in "physiognomy and bodily characteristics" they differ from the other Dravidian tribes in no more than a degree, which can be accounted for by civilization and social institutions, that they are a tribe more from position than genealogy, and cannot be said to be of distinct origin. He regards their presumption to be of Kshatriya or Rajput descent to be without the slightest foundation in history or tradition, and considers that there is no evidence obtainable from their customs, language, or social and religious institutions for such an assumption. Richter groups the Coorgs with the *Sūdras*, but says it ought to be their pride to discard all notion of caste altogether, and to stand upon their own merits as Coorgs.

The last of these statements is the only one which my observations would lead me to fully endorse. Although the Coorgs have been hinduized in religion they are notably far from being orthodox, and have always been most refractory subjects for the Brahmans. Their social institutions strike any new comer as different to those of the tribes around, whilst their traditions have been supplanted by late Brahman manufactures of the kind of the *Kāveri Purāṇa*.<sup>4</sup> But these characteristics are only a degree more reliable than language as an index to racial affinities. All these—religion, social institutions and language—may undergo most thorough change without an appreciable infusion of foreign blood and consequent variation in physical characteristics. The Coorgs speak a Dravidian language,<sup>5</sup> but all those who speak Dravidian languages are not necessarily of the same race, any more than those who speak Aryan languages are immediately related by blood.<sup>6</sup> Dr. Gustav Oppert, who assumes the racial unity of all the different tribes of India, classes the Coorgs with the Gaudian division of the *Bhāratas* (pre-Aryans) on account of their name.<sup>7</sup> Those tribes whose names are

<sup>3</sup> *Ethnographical Compendium on the Castes and Tribes found in the Province of Coorg*, 1887, pp. 2, 3 and 19.

<sup>4</sup> Cf. Richter, *Manual of Coorg*, 1870, p. 215; L. Rice, *Gazetteer of Mysore and Coorg*, Vol. III, 1878; p. 85.

<sup>5</sup> *Koḍaga* is a dialect of Kannada (Canarese) bearing a close relation to the older forms of the language according to Dr. Caldwell (*Grammar of the Dravidian languages*, Intro., p. 36).

<sup>6</sup> Cf. Karl Penka, *Origines Ariocæ*, 1883; W. Z. Ripley, "The Races of Europe," 1899, Chap. II and literature therein quoted.

<sup>7</sup> On the original inhabitants of *Bharatavarsha*, 1893, p. 162.

derived from *mala*, Dr. Oppert names Dravidians,<sup>8</sup> and those whose names are derived from *ko* he speaks of as Gaudians, hence the Coorgs (*Koḍaga*) are included in the latter division. On this basis of classification we find the Coorgs grouped with such essentially distinct types as the thick-lipped, dolichocephalic, platyrrhine, black-skinned, stunted Kurumba; the tall, hairy, dolichocephalic Toda—tribes which have as little blood relationship to one another as that which exists between Bishop Johnson, late of Calcutta, and Bishop Johnson of Nigeria.

With what we know of the anthropometry of Indian tribes, a mere glance at Dr. Oppert's Gaudian category<sup>9</sup> is sufficient to confirm his own words:—"it is impossible to be too cautious in drawing up such lists."

I am not prepared to offer any opinion as to whether the Coorgs were amongst the inhabitants of Bhāratavarṣa when the Aryan invasions commenced, or whether they themselves have any Aryan blood in them. But there is one conclusion which seems to me to be perfectly justifiable from a survey of their physical characteristics, namely, that of all the tribes and castes which have so far been examined in South India, Brahmans included, the Coorgs show less evidence than any other of an admixture of the blood which finds its typical expression in such tribes as the Kurumba, Yeruva, Irula and Paniyan, who are but the South Indian consins of the Kols and Gonds, and the modern representatives of the Dasyus—the black-skinned, "noseless" savages who opposed the early Aryan intrusion. If the Sūdras originated from the first cross between the Aryans and the aboriginal tribes, the Coorgs have fewer claims to be classed as Sūdras than any tribe or caste in South India: on this point they have good reason to resent Richter's assertions. But if, as Risley has pointed out, there is a general correspondence between social precedence in caste and degree of approximation to the Aryan type, the Coorgs may well take Richter's advice, and despise all notion of caste; for, judging by such characters as the stature, nasal index, comparative length of upper limbs, facial angle and colour of skin, the Coorgs take a high place amongst the people of the South, and in all these respects, as well as in the characters of the cranium, they show fewer signs of aboriginal blood than even the Brahmans of the Madras Presidency.

Whether or not there is any Aryan blood in the Coorgs is a question which forms a part only of the larger one as to whether there is any appreciable Aryan blood at all in the native races of India. Assuming that Penka's tall, dolichocephalic, blonde and

<sup>8</sup> *Op. cit.*, p. 13.

<sup>9</sup> *Op. cit.*, p. 112.

leptorhine Scandinavian is the typical Aryan, Mr. Risley has described the gradual fading out and dilution of these characteristics from the point of Aryan irruption on the N.-W. frontier of India in the south and south-easterly directions towards Bengal. The weak point of this argument lies in the doubtful nature of the premises on which it is built; for a large number of competent authorities consider the brachycephalic neolithic race, who built the lake-dwellings of Switzerland and North Italy, to be more nearly related to the race who spoke the undivided Aryan language than Penka's Scandinavians were. The cephalic index is, therefore, the most dangerous of ethnic characters to select as a test of Aryan relationship, and, indeed, no single one of the measurements usually made should be relied on as a racial test. But in this particular question the nasal index is of supreme importance; for, whether we regard the dolichocephalic Tenton or his brachycephalic neighbour as the original Aryan type, both contrast most strongly with the aboriginal tribes of India in being distinctly leptorhine.

If now we take the nasal index as a test of Aryan affinities amongst the castes of India, we find that instead of there being a fading out of the Aryan strain as we pass south-eastwards along the Gangetic belt, we get for some castes, notably the Brahmans, an improvement in the shape of the nose as we pass from the N.-W. Provinces to Behar and thence to Bengal.

In the case of the *Brahmans*, for example, Risley's figures for the nasal indices are:—

				Nasal index.
N.-W.P. Brahmans	...	...	...	74.6
Behar	„	...	...	73.2
Bengal	„	...	...	70.4

A similar variation holds good for a lower caste, the *Goálas*:—

				Nasal index.
N.-W.P. Goálas	...	...	...	80.9
Behar	„	...	...	76.7
Bengal	„	...	...	74.2

and again for the despised *Chamárs*:—

				Nasal index.
N.-W. P. Chamárs	...	...	...	86.0
Behar	„	...	...	82.8
Bengal Muchis	...	...	...	74.9

This distribution of the nasal indices is thus just the reverse of what we should expect if the high castes to the south-east of the Punjab obtained their characteristics from Aryan sources. The evi-

degrees of the nasal indices, moreover, is not necessarily inconsistent with the variation in cephalic indices, firstly, because it is not proved that dolichrocephalism was an Aryan characteristic, and, secondly, because towards the east an invading tribe would overlap the distinctly brachycephalic Mongoloid fringe.

I do not mean to infer by these remarks that the Aryan induction has been swamped beyond all possible recognition, nor do I follow Messrs. Nesfield and O'Donnell's criticisms of Mr. Risley's conclusions, and fail to recognise the essential ethnic differences between the high and low castes amongst Hindus. As the conclusions on this question have an indirect bearing on the questions discussed below, namely, the relationship of the Caste to their neighbouring races, I will re-state in another form one side of Mr. Risley's argument which appears to have been overlooked.

Mr. Risley<sup>10</sup> has stated that the remarkable correspondence between the gradations of type, as brought out by certain indices, and the gradations of social precedence enables us to conclude that *community of race*, and not *community of function*, is the real determining principle, the true *causa causans*, of the caste system. In other words, we find high social position associated with a certain physical type and conversely low social position with a markedly different type.

Mr. J. C. Nesfield takes up a position utterly opposed to this view. While not denying that a race of "white-complexioned foreigners," who called themselves by the name of Arya, invaded the Indian valley of Kábul and Kashmir some four thousand years ago, and imposed their language and religion on the indigenous races by whom they found themselves surrounded, Mr. Nesfield maintains that the blood imported by the foreign race became gradually absorbed into the indigenous, so that almost all traces of it eventually disappeared, and that for the last three thousand years at least no real difference of blood between Aryan and Aboriginal has, except in a few isolated tracts, existed. The "Aryan brother" is, he says, a much more mythical being than Rám or Bráhmá. Mr. Nesfield thinks that "function, and function only, was the foundation upon which the whole caste system of India was built up."<sup>11</sup>

Mr. C. J. O'Donnell has also criticised Mr. Risley's recognition of an ethnological stratification amongst the Indian castes, and has denied that the published figures justify an ethnic distinction between high and low castes. He points out that in the matter of nasal refine-

<sup>10</sup> *Journ. Asiatic Soc.*, XL. (1890), 252.

<sup>11</sup> Brief view of the caste-system of the North-West Provinces and Oudh. Cf. D. C. J. Thomson, Punjab Census Report, 1861, p. 171 et. seq.

ment the Chuhra or scavenger of the Punjab, with a nasal index of 75.2, is not much inferior to the Brahman of the N.-W. Provinces with a nasal index of 74.6. This Mr. O'Donnell regards as a singular confirmation of Mr. Nesfield's assertion that a "stranger walking through the class-rooms of the Sanskrit College at Benares would never dream of supposing that the students seated before him were distinct in race and blood from the scavengers who swept the roads."

There seems to be a tendency in this argument to accentuate the apparent difference between Mr. Risley's standpoint and the position taken up by Mr. Nesfield. In the first place, Mr. Risley's argument regarding the fading out of the Aryan type in the south-easterly direction premises a *mixture* of blood and dilution of the Aryan strain. It is consequently not surprising that a high caste in the N.-W. Provinces shows an average nose only a degree superior to that of a lower caste in the Punjab. It is also to be expected that where an admixture of blood has taken place comparatively recently in the history of a caste instances of atavism will be specially prominent. In consequence of the latter circumstance, it seems to me that Mr. O'Donnell's further comparison within the same area of platyrrhine Brahman individuals with leptorrhine Chamār individuals picked out of Mr. Risley's tables is still perfectly consistent with the assumption that the Bengal Brahmans are on an average of a higher type than the Bengal Chamārs. Where both are mixtures it is natural to expect individuals in both castes reverting in some one particular to the pure constituent types. It will be shown with reference to the Coorgs that it is important to note that the individual may revert to an extreme type in one particular feature, and may vary in the opposite direction in all other characters; that is to say, in a tribe which is the result of, for instance, a mixture of a dolichocephalic platyrrhine race with a brachycephalic leptorrhine race, we shall find that the leptorrhine individuals are not necessarily more brachycephalic than those that are platyrrhine, nor are those that are most brachycephalic necessarily more leptorrhine than the others. On the contrary, we shall find individuals which are, say, distinctly platyrrhine exhibiting marked brachycephalism or any other feature which especially characterises the other constituent of the blend.

If this circumstance had been kept in view we should probably not have had platyrrhine Brahmans compared with leptorrhine Chamārs. Both castes are the result of blood mixtures and consequently a platyrrhine Brahman may in all other respects show more Aryan characteristics than the average individual of his caste. Conversely, a leptorrhine Chamār may be most markedly aboriginal in every other feature. Mr. O'Donnell has picked out from amongst Mr. Risley's

Bengal list, five Brahmins whose average nasal index (56.3) shows a more platyrrhine (aboriginal, that is) character than the average of 5 Bengal Mûchis (74.9). The average nasal index of the Bengal Brahman is 70.4 and that of the Bengal Mûchi<sup>15</sup> 82.8; that is to say, these five Brahmins as well as the five Mûchis have a more aboriginal type of nose than the average for either caste. Now let us see if they are more aboriginal in other respects than their respective averages. Of the features which distinguish the Aryan type from the aboriginal we have to leave the cephalic index out of consideration on account of its doubtful significance. The aboriginal head is certainly dolichocephalic the Aryan possibly so. But the two types admittedly differ in stature: the Brahman and all castes of supposed Aryan strain are on an average distinctly taller than the aboriginal tribes. If then Mr. O'Donnell's reasoning is on safe lines we should expect to find the five Brahmins, whose aboriginal characteristics he asserts because of their broad noses, to be shorter than the average for their caste. As a matter of fact, the reverse is the case, and we find, on picking out the data from Mr. Risley's tables, that these five are actually taller than the average by 1.2 cm. Reference to the analysis of the data for contrasting the Coorgs and Yerucas will show the same thing: members of the higher caste who are more platyrrhine than the average are not necessarily more aboriginal in other respects; those of the aboriginal tribes who are more leptorrhine than their fellows are not on an average superior in other respects. This fact, and the other to which I have alluded above, namely, the wide individual variation within a caste which is the result of comparatively recent blood mixture, seem to have been lost sight of by those who refuse to recognise the ethnic differences which distinguish the high caste Hindus from the aboriginal tribes, and, to a lesser degree, mark differences between the social grades of the Hindus themselves.

If we take the averages for the castes within the same geographical limits, or still better, if we classify (and thence express graphically) the characters of the individuals measured, we see that the ethnic classification is not far from parallel with the social order. Take as an example, three castes occupying a high, a mean and a distinctly low, social position respectively, classify their noses and plot the results on

<sup>15</sup> Mr. O'Donnell refers to these as Chamîra, whereas in Mr. Risley's tables they are given as Mûchis which is possibly an important distinction; for though in function the Mûchi of Bengal does not differ much from the Chamîr of Behar and the N.-W.P., in ethnic characters he is distinctly of a higher type—an instance, in my opinion, of the danger of blindly following the divisions of castes according to function only.

ordinary section paper. We find that whilst there is an overlapping of the three curves, the crests of the curves, around which the maximum number of individuals are grouped, are arranged in order of social rank, and by doing this for the same three castes in, for instance, Behar and in the North-West Provinces we find that the same order is exhibited by, for example, the Brahmans, Goālas and Chamārs, representing the high, mean and low ranks respectively.

TABLE I.

**Classification of noses of Behar Brāhmans,  
Goālas and Chamārs.**

Nasal indices in groups.	INDIVIDUALS IN EACH GROUP.		
	Brāhman.	Goāla.	Chamār.
A. Below 60    ...    ...	...	2	...
B. 60-65       ...    ...	7	3	1
C. 65-70       ...    ...	18	13	3
D. 70-75       ...    ...	16	13	6
E. 75-80       ...    ...	16	32	10
F. 80-85       ...    ...	7	28	12
G. 85-90       ...    ...	1	5	19
H. 90-95       ...    ...	2	3	9
J. 95-100      ...    ...	...	1	2
K. Above 100    ...    ...	...	...	...

The contrast in this table is noticeable, but is much more evident when expressed graphically as in figure 1, where the crests at C, E and G are in the order of social precedence.



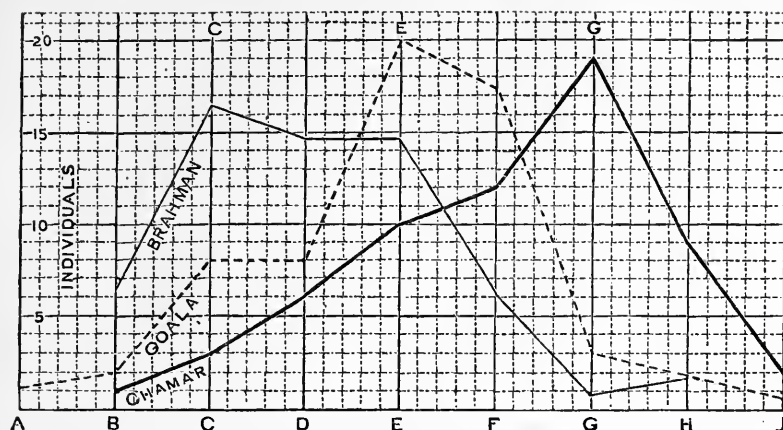


Fig. 1.—Comparison of nasal indices of Behar Brāhmans, Goālas and Chamārs.

TABLE II.

Classification of noses of N.-W.P. Brāhmans,  
Goālas and Chamārs.

Nasal indices in groups.	INDIVIDUALS IN EACH GROUP.		
	Brāhmans.	Goālas.	Chamārs.
A. Below 60 ... ..	2	1	...
B. 60-65 ... ..	8	2	1
C. 65-70 ... ..	18	6	1
D. 70-75 ... ..	26	10	5
E. 75-80 ... ..	25	24	14
F. 80-85 ... ..	10	25	21
G. 85-90 ... ..	5	14	31
H. 90-95 ... ..	4	14	17
J. 95-100 ... ..	2	2	5
K. Above 100 ... ..	...	2	4

These figures are expressed graphically in figure 2, which shows the same order of nasal indices as in the case of the corresponding castes in Behar.

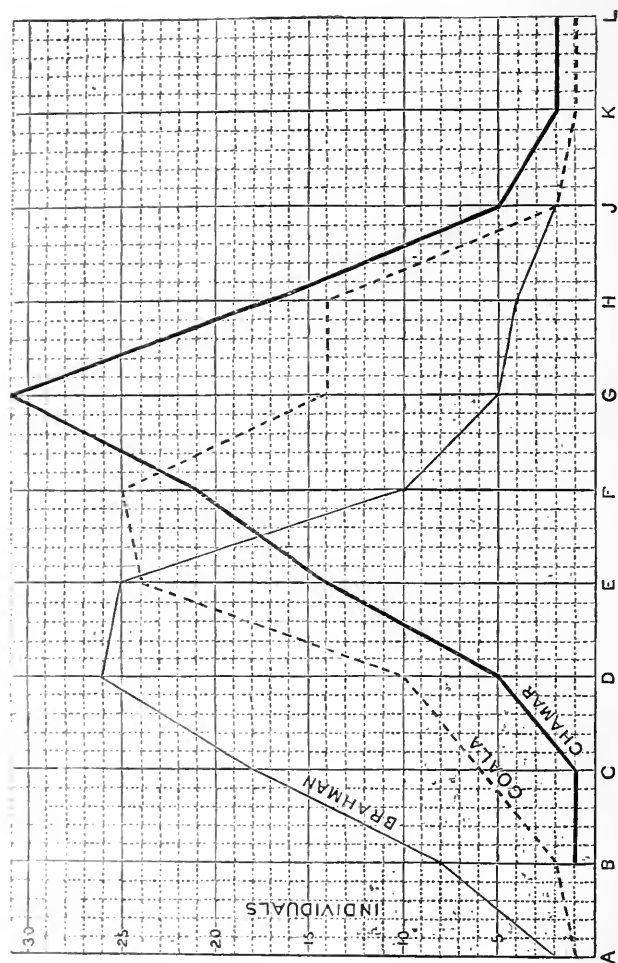


Fig. 2.—Comparison of nasal indices of N.-W.P. Brāhmanas, Gōḍlas and Chamārs.

This analysis of Mr. Risley's figures seems to confirm his conclusion that there is a substantial agreement between the ethnic characters and the social status of the Hindu castes. But we are as far as ever from proving that the features of the higher castes are due to Aryan blood; they might just as well be due to artificial selection in the past, the superior type having usurped and maintained the superior position. We are not only unable to prove that these differences are due to Aryan blood, but it is even doubted by some prominent authorities that a dis-

tinct Aryan *race* ever existed at all. Still less is it possible to define what its ethnic characteristics were.<sup>13</sup>

One generalization, however, appears to be permissible, namely, by whatever process it has been brought about, whether by infusion of foreign blood or by racial differentiation, there is a physical contrast between the average high caste Hindu and the aboriginal tribe. If we regard the physical characters of the former to be of a high type, and of the latter to be of a lower type, then of all the castes we know in South India the Coorgs rank amongst the highest. In all these respects—colour of skin, stature, nasal index and length of fore-limbs—they are superior to the Brāhmans of the same area, and if the Brāhmans, representing the highest of all the castes in the South, retain their position by purity of blood, then the Coorgs may well take Richter's advice and despise all caste.

<sup>13</sup> Cf. Ripley, *The Races of Europe*, 1899, chap. xvii.

### III.—DETAILS OF MEASUREMENTS OF COORGS AND YERUVAS.

The physical characteristics selected for measurement are those recommended by Mr. Risley in his "Anthropometric Instructions."<sup>14</sup>

Some of these measurements are for the present of doubtful racial significance, and they are consequently not considered in the tables arranged below for comparing the Coorgs with the other tribes of the South of India.

I have considered it essential to record the individual measurements for the use of those who may subsequently develop any form of analysis which does not now occur to me, and I have had frequent occasion to wish my predecessors had done the same. Mere averages express but a very small portion of the truth, and permit to a limited degree only the comparison of one race with another.

TABLE III.

#### Individual Measurements of Coorgs.

Number.	Age.	Stature.	Span of arms.	Ratio of span to stature.	Chest girth.	Ratio of chest to stature.	Height sitting.	Height kneeling.	Left foot, length.	Ratio of foot to stature.	Cubit.	Ratio of cubit to stature.	Middle finger left hand.
1	25	161	168	104·3	74	46·0	80	119	25·0	15·5	45·0	27·9	11·3
2	31	164	167	101·8	80	48·8	85	123	24·0	14·6	43·5	26·5	10·9
3	39	164	168	102·4	82	50·0	87	120	24·2	14·8	43·7	26·6	11·2
4	37	171	171	100·0	87	50·9	89	127	25·1	14·7	45·0	26·3	11·4
5	29	165	173	104·9	85	51·5	81	124	25·2	15·3	46·1	27·9	10·9
6	26	175	179	102·3	88	51·3	91	130	25·0	14·3	48·2	27·5	12·0
7	31	169	173	102·4	84	49·7	86	125	24·9	14·7	45·3	26·8	11·5
8	29	166	173	104·2	82	49·4	86	125	25·3	15·2	46·7	28·1	11·2
9	33	173	176	101·7	86	49·7	87	128	24·5	14·2	46·8	27·1	11·0

<sup>14</sup> *Journ. As. Soc. Beng.*, Vol. LXII (1893), Part III.

TABLE III. (Continued.)

Number.	Age.	Stature.	Span of arms.	Ratio of span to stature.	Chest girth.	Ratio of chest to stature.	Height sitting.	Height kneeling.	Left foot, length.	Ratio of foot to stature.	Cubit.	Ratio of cubit to stature.	Middle finger left hand.
10	27	175	184	105·2	89	50·8	90	130	25·0	14·3	48·1	27·5	12·1
11	34	171	179	104·7	80	45·7	88	126	26·2	15·3	47·8	27·3	11·1
12	25	176	186	105·7	84	47·7	85	127	25·1	14·2	48·5	27·6	11·8
13	25	170	176	103·5	78	45·9	85	125	25·0	14·9	45·2	26·6	11·2
14	28	176	181	102·8	82	46·6	88	130	25·1	14·3	48·4	27·5	11·7
15	25	167	173	103·6	79	47·3	85	124	24·8	14·9	45·8	27·4	11·5
16	35	166	169	101·8	80	48·2	86	124	23·3	14·0	45·5	27·4	11·4
17	32	172	172	100·0	83	48·3	88	129	23·9	13·9	47·0	27·3	11·3
18	40	164	169	103·1	77	47·0	87	124	25·2	15·3	45·0	27·4	11·0
19	29	160	166	103·7	81	50·6	81	119	23·2	14·5	43·8	27·4	10·5
20	29	179	176	98·3	83	46·4	94	133	25·8	14·4	48·8	27·3	11·6
21	27	177	187	105·6	82	46·3	91	131	26·6	15·0	50·5	28·5	12·2
22	39	165	180	109·1	83	50·3	84	122	23·9	14·5	47·2	28·6	11·8
23	40	158	167	105·7	81	51·3	82	118	23·5	14·9	44·5	28·1	10·5
24	28	164	174	106·1	81	49·4	83	122	24·9	15·2	46·3	28·2	11·0
25	42	167	173	103·6	83	49·7	87	125	25·4	15·2	47·7	28·6	14·6
26	35	182	181	99·5	86	47·3	90	134	27·0	14·8	48·3	26·5	11·5
27	29	177	179	101·1	79	44·6	92	133	26·1	14·7	47·5	26·8	11·0
28	38	159	164	103·1	81	50·9	83	119	24·2	15·2	44·3	27·9	11·0
29	23	169	174	103·0	87	51·5	87	125	24·8	14·7	47·2	27·9	11·4
30	30	166	168	101·2	82	49·4	86	124	25·1	15·1	46·1	27·7	11·0
31	25	163	170	104·3	78	47·9	85	123	24·2	14·8	46·2	28·3	11·4
32	35	168	176	104·8	82	48·8	87	124	24·8	14·8	48·4	28·8	11·9

Number.	CEPHALIC			NASAL			Bigonial breadth.	Bizygomatic breadth.	Maxillary-bizygomatic index.	Bimalar breadth.	Naso-malar breadth.	Naso-malar index.	Facial Angle.
	Length.	Breadth.	Index.	Length.	Breadth.	Index.							
1	17.7	14.9	84	4.6	3.6	78	10.2	13.0	78	9.3	11.8	127	69
2	18.0	14.8	82	4.6	3.7	80	9.4	13.2	72	10.0	12.8	128	69
3	18.5	14.9	80	5.1	3.8	74	10.0	14.2	70	10.1	12.4	123	70
4	19.0	14.8	78	5.2	3.9	75	10.2	13.3	76	10.1	13.2	130	71
5	18.2	14.3	78	4.6	4.0	86	10.4	13.4	77	10.3	12.0	116	66
6	18.8	14.0	74	5.4	3.5	65	11.0	13.8	79	10.1	12.6	124	70
7	18.0	15.2	84	5.2	4.0	76	10.8	14.3	75	10.5	12.6	120	71
8	18.3	14.4	78	4.9	3.9	79	10.5	13.5	78	10.0	12.4	124	72
9	17.3	14.9	85	5.1	3.8	74	9.7	13.6	71	9.7	11.8	121	68
10	18.5	15.1	81	5.6	3.8	68	10.6	13.2	80	9.8	11.6	119	69
11	18.5	14.4	78	5.3	3.7	70	9.7	13.4	73	9.8	11.8	120	67
12	18.4	14.7	79	5.7	3.7	65	10.2	13.3	76	10.2	12.4	121	71
13	19.4	15.3	79	5.6	3.9	69	10.4	13.8	75	10.4	11.8	113	70
14	18.8	14.7	78	5.3	3.9	74	10.2	13.2	77	10.0	12.2	122	69
15	18.9	14.5	76	5.4	3.3	62	10.2	13.3	77	10.5	13.0	124	71
16	19.5	14.9	76	5.3	3.9	70	10.1	13.2	76	11.0	13.2	120	73
17	17.3	14.5	84	4.8	3.2	66	10.0	12.6	79	9.6	11.4	118	63
18	17.4	14.4	82	5.6	3.8	68	10.5	13.4	78	10.4	12.0	115	67
19	16.8	15.0	88	5.2	3.6	69	10.3	13.4	78	10.2	11.0	108	67
20	18.2	13.8	76	5.0	3.6	72	11.1	13.1	84	10.2	11.6	114	67
21	18.7	15.4	82	5.3	3.7	70	10.4	14.0	74	10.6	12.0	113	71
22	19.4	14.9	77	5.0	3.5	70	11.0	13.6	81	10.8	11.6	113	67
23	17.1	15.2	89	5.1	3.5	70	9.5	13.4	70	9.7	11.4	117	70
24	18.1	15.3	84	4.8	3.6	75	10.1	14.0	72	10.3	11.4	110	72
25	19.0	14.5	76	5.6	3.6	74	10.2	13.4	76	9.8	12.0	122	68

TABLE III.—(Continued.)

Number.	CEPHALIC			NASAL			Bigoniac breadth.	Bizygomatic breadth.	Maxillary-bizygomatic index.	Bimalar breadth.	Naso-malar breadth.	Naso-malar index.	Facial Angle.
	Length.	Breadth.	Index.	Length.	Breadth.	Index.							
26	18.8	14.8	79	5.5	3.7	67	10.0	13.3	75	10.0	11.6	116	70
27	18.1	14.3	79	4.6	3.5	76	10.1	13.4	75	9.3	11.0	118	70
28	18.2	14.1	77	4.8	4.0	83	9.5	12.9	76	9.3	11.	122	68
29	18.8	15.0	80	5.3	3.7	70	10.9	13.6	80	10.3	12.8	124	72
30	19.2	14.2	74	5.2	3.6	70	9.4	12.9	76	9.1	11.6	127	66
31	18.6	13.8	74	5.0	3.5	70	9.7	12.6	77	9.4	12.0	127	70
32	17.9	14.4	80	5.2	3.8	73	10.4	13.7	76	10.4	13.0	125	68

TABLE IV.

## Summary of Measurements of Coorgs.

	32 COORG MEN.					AVERAGE OF	
	Maximum.	Average.	Minimum.	Divergence from the average of		10 Coorg Officials.	8 Coorg Prisoners.
				Max.	Min.		
	cm.	cm.	cm.	cm.	cm.	cm.	cm.
Stature ... ..	182	168.7	158	13.3	10.7	170.5	168.1
Span of arms ... ..	187	174.1	164	12.9	10.1	176	172.5
Span relative to stature (100)	109.1	103.2	98.3	7.0	3.8	103.2	102.6
Chest girth ... ..	89	82.2	74	6.8	5.2	84.5	81.1
Chest girth relative to stature (100) ... ..	51.5	48.7	44.6	2.8	4.1	49.5	48.3
Height sitting ... ..	94	86.4	80	7.6	6.4	86.8	86.2

TABLE IV.—(Continued.)

	32 COORG MEN.					AVERAGE OF	
	Maximum.	Average.	Minimum.	Divergence from the average of		10 Coorg Officials.	8 Coorg Prisoners.
				Max.	Min.		
	cm.	cm.	cm.	cm.	cm.	cm.	cm.
Height kneeling ... ..	134	125.3	118	8.7	7.3	126.2	125
Left fore-arm (cubit) ...	50.5	46.5	43.5	4.0	3.0	46.6	46.6
Cubit relative to stature (100)	28.8	27.6	26.3	1.3	1.2	27.3	27.7
Left foot, length ... ..	27.0	24.9	23.2	2.1	1.7	25.0	25.1
Left foot relative to stature (100)	15.5	14.8	13.9	0.8	0.8	14.7	14.9
Middle finger, left hand ...	12.2	11.4	10.5	0.8	0.9	11.4	11.3
Cephalic length ... ..	19.5	18.4	16.8	1.1	1.6	18.4	18.4
Cephalic breadth ... ..	15.4	14.7	13.8	0.7	0.9	14.7	14.4
Cephalic index ... ..	89	79.9	74	9.1	5.9	79.9	78.3
Bigonial breadth ... ..	11.1	10.2	9.4	0.9	0.8	10.3	10.1
Bizygomatic breadth ... ..	14.3	13.4	12.6	0.9	0.8	13.5	13.2
Maxillary-zygomatic index ..	84	76.1	70	7.9	6.1	76.3	76.5
Facial angle ... ..	73°	69.1°	63°	3.9°	6.1°	69.4°	69.1°
Nasal height ... ..	5.7	5.15	4.6	0.55	0.55	5.16	5.03
Nasal breadth ... ..	4.0	3.69	3.2	0.31	0.49	3.81	3.68
Nasal index ... ..	86	72.2	62	13.9	10.1	73.8	73.2
Bimalar breadth ... ..	11.0	10.0	9.1	1.0	0.9	10.0	9.65
Naso-malar breadth ... ..	13.2	12.0	11.0	1.2	1.0	12.2	11.9
Naso-malar index ... ..	130	120	108	10	12	122	123
Vertex to intersuperciliary point* ... ..	11.5	9.71	7.3	1.79	2.41	...	...
Vertex to tragus* ... ..	15.5	13.1	11.5	2.4	1.6	...	...
Vertex to chin* ... ..	24.0	21.7	20.5	2.3	1.2	...	...
Breadth of hips* ... ..	30.0	27.2	25.8	2.8	1.4	...	...

\* Of 18 subjects whose left feet have the same average length (24.9) as the 32 Coorgs.



## MEASUREMENTS OF 25 YERUVA MALES.

This tribe which forms, next to the Coorgs, the largest section of the population of the province, is totally distinct in general appearance and in bodily measurements. Many of the Yeruvas still live in a very wild state in the jungle, and are altogether difficult to get into contact with; others have enlisted as coolies in coffee plantations, and it is well, consequently, to have their measurements recorded before their blood suffers from the laxity of marriage laws which sometimes attends such a complete alteration of their mode of living.

Mr. Thurston considers that 25 subjects taken at random will give a fair average for a compact well-defined tribe. My investigations confirm this conclusion; but in castes which are the result of a comparatively recent cross, a larger number of measurements is desirable, and in order to make an analysis of individual variations a larger number is essential.

TABLE V.

## Individual Measurements of Yeruvas.

NAME.	Age.	Stature.	Span of arms.	Ratio of span to stature.	Chest girth.	Ratio of chest to stature.	Height sitting.	Height kneeling.	Left foot length.	Ratio of foot to stature.	Cubit.	Ratio of cubit to stature.	Middle finger, left hand.
Chenkara	30-35	168	177	105.4	83	49.4	83	120	25.7	15.3	49.0	29.2	11.6
Bolli ...	27	156.5	172	109.6	81	51.6	77	116	23.8	15.2	48.2	30.7	11.0
Kada ...	25	154	163	103.9	79	51.3	76	112	23.0	14.9	43.5	28.2	10.4
Fileya ...	27	161	164	101.9	81	50.3	82	118	23.7	14.7	45.0	28.0	11.2
Nambi ...	35	158	165	104.4	78	49.4	79	115	23.8	15.1	45.2	28.6	11.6
Chatta ...	38	160	168	105.0	80	50.0	81	120	25.0	15.6	46.0	28.3	11.5
Sanda ...	31	157	167	106.3	78	49.1	78	114	23.1	14.1	45.0	28.0	10.3
Kallinga	45	163	166	101.9	78	47.9	83	122	24.6	15.1	45.0	27.6	10.7
Juddia ...	25	171	171	104.9	86	52.8	83	121	24.7	15.2	46.6	28.6	11.2
Soma ...	25	163	178	109.2	80	49.1	79	118	26.2	16.8	49.2	30.2	11.5
Chatha ...	22	157	...	108.9	80	50.9	79	117	24.6	15.6	46.0	29.3	11.2
Buswa ...	25	164	176	107.8	81	49.4	79	120	26.2	16.0	47.7	29.1	11.3

TABLE V.—(Continued).

NAME.	Age.	Stature.	Span of arms.	Ratio of span to stature.	Chest girth.	Ratio of chest to stature.	Height sitting.	Height kneeling.	Left foot length.	Ratio of foot to stature.	Cubit.	Ratio of cubit to stature.	Middle finger, left hand.
Nunja ...	28	150	157	104·7	72	48·0	75	110	23·1	15·4	44·0	29·3	10·3
Wos Nunja	26	159	165	103·8	80	50·3	81	118	24·3	15·3	44·7	28·1	10·9
Dod Nunja	27	155	163	105·2	77	49·7	80	116	23·7	15·3	44·2	28·5	10·7
Bidda ...	25	154	162	105·2	80	52·0	78	114	23·3	15·1	43·5	28·3	10·5
Jogy ...	35	158	166	105·1	75	47·5	80	116	23·8	15·1	45·5	28·7	11·2
Mulla ...	27	154	161	104·5	85	55·2	81	117	22·7	14·7	43·7	28·4	10·4
Belli	26	159	171	107·5	80	50·3	82	117	25·9	16·3	46·4	29·2	11·3
Murria ...	28	159	165	103·8	77	48·4	77	115	23·0	14·5	45·7	28·7	10·9
Sidda ...	30	155	162	104·5	75	48·4	78	114	23·1	14·9	44·2	28·5	10·4
Bolli ...	35	167	171	102·4	76	45·5	77	117	22·9	13·7	43·5	26·0	10·3
Judia ...	38	164	172	104·9	86	52·4	83	122	23·8	14·5	45·1	27·5	11·4
Namby ...	35	153	162	105·9	85	55·6	82	118	23·7	15·5	45·4	29·7	11·3
Nunja ...	38	157	166	105·7	79	50·3	80	116	23·5	15·0	45·2	28·8	11·6

NAME.	CEPHALIC			NASAL			Bignoniac breadth.	Bizygomatic breadth.	Maxillary bizygomatic index.	Bimalar breadth.	Nasomalar breadth.	Nasomalar Index.	Facial Angle.
	Length.	Breadth.	Index.	Length.	Breadth.	Index.							
Chenkarn ...	18·4	14·0	76	4·5	4·1	91	9·7	12·5	77	10·0	11·2	112	71
Bolli ...	18·1	13·2	73	4·7	4·1	87	8·5	13·0	65	10·6	11·6	109	74
Kada ...	17·5	13·1	75	5·1	4·1	80	9·0	13·0	69	10·4	11·6	111	66
Pileya ...	18·4	13·5	73	4·1	3·7	90	9·1	12·6	72	9·8	12·0	122	64
Nambi ...	17·3	13·4	77	4·8	3·9	81	9·2	13·0	71	9·9	11·0	111	64
Chatta ...	19·3	13·5	70	4·9	4·1	84	9·1	12·8	71	10·5	12·4	118	67
Sanda ...	18·3	13·7	74	4·4	4·0	91	9·2	13·0	71	10·5	12·2	116	64
Kallinga ...	19·2	13·2	68	4·7	4·5	95	9·2	12·7	72	10·0	11·0	110	67
Juddia ...	18·7	13·9	74	4·4	4·3	97	9·5	13·5	70	10·5	12·2	116	68

TABLE V.—(Continued).

NAME.	CERPHALIC			NASAL			Bigonial breadth	bizygomatic breadth.	Maxillary bizygomatic index.	Bimalar breadth.	Nasomalar breadth.	Nasomalar Index	Facial Angle.
	Length.	Breadth.	Index.	Length.	Breadth.	Index.							
10 Soma ...	18.2	13.5	74	4.5	4.1	91	9.5	13.0	73	10.4	11.4	109	67
11 Chatha ...	18.5	12.5	67	5.0	4.3	86	9.3	12.4	75	9.7	10.8	111	61
12 Buswa ...	18.2	13.4	73	4.3	3.8	90	10.0	13.2	76	9.2	10.6	115	64
13 Nunja ...	17.7	13.4	76	3.7	3.8	103	9.3	12.3	75	9.4	10.6	113	66
14 Wos Nunja ...	18.3	14.0	76	4.3	3.8	90	9.7	13.0	74	9.5	10.6	111	68
15 Dod Nunja ...	18.7	13.1	70	4.3	4.0	93	9.7	13.1	74	9.7	10.8	111	70
16 Bidda ...	18.5	12.8	70	4.1	3.9	95	9.7	12.6	77	9.6	11.2	117	63
17 Jogy ...	18.7	13.8	74	4.7	4.2	89	9.8	14.1	70	10.4	12.2	117	64
18 Mulla ...	18.5	13.2	71	4.6	3.9	85	10.0	13.0	77	9.5	11.2	118	63
19 Belli ...	18.0	13.5	75	4.5	3.8	84	9.7	12.5	78	9.2	10.6	115	62
20 Murria ...	16.4	13.4	81	4.6	3.9	85	9.0	12.0	75	9.3	12.0	128	62
21 Sidda ...	18.1	13.6	75	4.2	4.0	95	9.5	12.0	79	9.1	10.4	114	64
22 Bolli ...	18.2	13.0	72	4.7	4.1	87	9.0	13.0	69	9.8	12.0	122	66
23 Judia ...	18.6	14.0	75	4.4	4.3	97	9.5	13.6	69	10.5	12.4	118	67
24 Namby ...	18.5	13.3	71	4.7	4.2	89	10.1	13.0	77	10.4	12.2	118	65
25 Nanja ...	17.4	13.5	77	4.8	4.3	89	9.3	12.9	72	9.9	11.2	113	65

TABLE VI.

## Summary of Measurements of Yeruvas and Coorgs compared.

	YERUVAS.					Average for Coorgs.
	Maximum.	Average.	Minimum.	DIVERGENCE FROM THE AVERAGE OF		
				Max.	Min.	
	cm.	cm.	cm.	cm.	cm.	cm.
Stature ...	168	158.7	150	9.3	8.7	168.7
Span of arms ...	178	167.3	160	10.7	7.3	174.1
Span of arms relative to stature (100) ...	109.6	105.4	101.9	4.2	3.5	103.2

TABLE VI.—(Continued).

	YERUVAS.					Average for Coorgs.
	Maximum.	Average.	Minimum.	DIVERGENCE FROM THE AVERAGE OF		
				Max.	Min.	
	cm.	cm.	cm.	cm.	cm.	cm.
Chest girth ... ..	86	79.5	72	6.5	7.5	82.2
Chest girth relative to Stature (100)	55.6	50.1	45.5	5.5	4.6	48.7
Height sitting ... ..	83	79.7	75	3.3	4.7	86.4
Height kneeling ... ..	122	117	110	5.0	7.0	125.3
Left fore-arm (cubit) ... ..	49.2	45.5	43.5	3.7	2.0	46.5
Cubit relative to stature (100) ...	30.7	28.6	26.0	2.1	2.6	27.6
Left foot, length ... ..	26.2	24.0	22.9	2.2	1.1	24.9
Length of foot relative to stature (100) ... ..	16.8	15.1	14.5	1.7	0.6	14.7
Length of middle finger ... ..	11.6	10.9	10.3	0.7	0.6	11.4
Cephalic length ... ..	19.3	18.2	16.4	1.1	1.8	18.4
Cephalic breadth ... ..	14.0	13.4	12.5	0.6	0.9	14.8
Cephalic index ... ..	82	73.6	67	8.4	6.6	79.9
Bigonial breadth ... ..	10.1	9.4	8.5	0.7	0.9	10.2
Bizygomatic breadth ... ..	14.1	12.8	12.0	1.3	0.8	13.4
Maxillary-zygomatic index ... ..	79	73.4	65	5.7	8.3	76.1
Facial angle ... ..	74°	65.7°	61°	8.3°	4.7°	69.1°
Nasal height ... ..	5.1	4.52	3.7	0.58	0.82	5.15
Nasal breadth ... ..	4.5	4.05	3.7	0.45	0.35	3.69
Nasal index ... ..	103	89.6	81	13.3	8.7	72.2
Bimalar breadth ... ..	10.6	9.9	9.1	0.7	0.8	10.0
Naso-malar breadth ... ..	12.4	11.4	10.4	1.0	1.0	12.0
Naso-malar index ... ..	128	115	109	13	6	120
Vertex to intersuperciliary point ...	10.8	9.5	8.5	1.3	1.0	9.71
Vertex to tragus ... ..	13.5	12.2	11.5	1.3	0.7	13.1
Vertex to chin ... ..	22.5	21.0	19.0	1.5	2.0	21.7

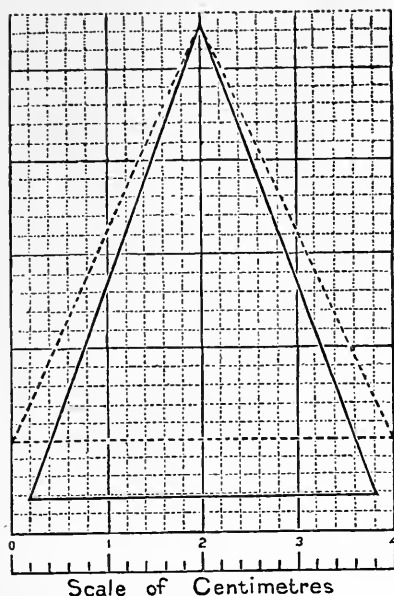
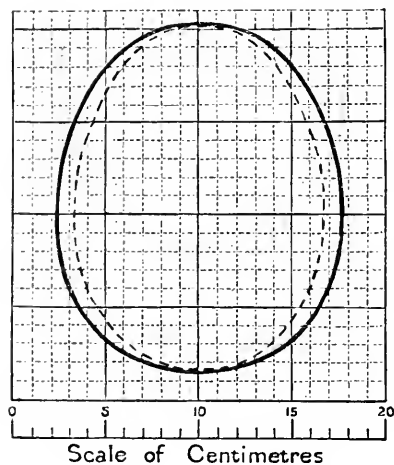


Fig. 3.—Diagrammatic comparison of average noses.

Coorg———. Yeruv.....

From the summary of measurements of the two tribes we see that the Coorg is on an average 10 cm. (3.9 inches) taller than the Yeruva, has a more leptorhine nose (see fig. 3), a shorter relative span, forearm and foot, a larger head with a distinct tendency towards brachycephalism (fig. 4), and a more perfect approach to orthognathism. With these characters which can be expressed in figures, we have the contrast of colour between the fair (light-brown) Coorg and the very dark-skinned Yeruva. The hair of the Coorg is straight whilst that of the Yeruva is distinctly wavy, and the features of the latter are generally of the stamp which we should characterise as distinctly low, the broad nose being accompanied by thick, slightly everted, lips.



*Fig. 4.—Average Coorg and Yeruva crania compared in plan.*  
 Coorg ———. Yeruva.....

## IV.—COMPARISON WITH OTHER SOUTH INDIAN TRIBES.

The extensive and excellent researches by Messrs. E. Thurston and F. Fawcett in the Madras Presidency enable us to determine the positions of these two tribes amongst the other races in South India. By comparing the average stature, cephalic index, nasal index, ratios of chest, span and left cubit to stature, the Yeruvas show in their measurements, as they do in general appearance, close affinities with the Kurumbas, Irulas, Paniyans and Kadirs, whilst the Coorgs occupy a place alone and quite distinct in most important points from all other previously measured South Indian races.

The average height of the Coorg male is 163·7 cm. (5 ft. 6½ in.), which is equalled in South India only by the Todas, and gives them a high place in Topinard's class "above the middle height (165—170 cm.)."<sup>1</sup>

Turning to the other features which constitute race characteristics, we find that the Coorgs are equally distinct from their neighbours in the south. They have the nearest approach to a brachycephalic head (79·9); in nasal index (72·2) they stand third in the list, following the nomadic Lambadis (69·1) of Mysore who have a fair skin and speak an Aryan language,<sup>2</sup> and the Sheik Muhammedans (70) who claim to be descendants of immigrants from the north.<sup>3</sup> Considered as percentage of stature, the Coorgs have a distinctly shorter foot, fore-arm and leg, smaller span and chest.<sup>4</sup> Their comparatively fair skin and manly bearing, remarked by the earlier visitors to the little mountain province, are thus shown by actual measurements to indicate correctly their general superiority to the so-called Dravidian races.

The following tables show the positions occupied by the Coorgs and Yeruvas amongst the tribes measured by Messrs. Thurston and Fawcett.<sup>5</sup>

<sup>1</sup> According to Thurston (*Bull. Madras Museum*, II, (1897), 46), the Todas have an average stature of 169·6 cm., being up to 1697 the only measured native representatives in South India of people "above the middle height," the next tallest tribe recorded by Thurston being below 165 cm.

<sup>2</sup> Cf. Thurston, *Bull. Madras Museum*, II, 54 and 64.

<sup>3</sup> Thurston, *Ibid.*, II, 63.

<sup>4</sup> In actual chest measurement (82·2 cm.) they are beaten only by the Lambadis (82·5 cm.), Todas and Kotas (83), and Kurubas (83·8), but their great height brings them down in the scale of ratios.

<sup>5</sup> F. Fawcett. Notes on some of the people of Malabar; *Bull. Madras Museum*, III, (1900), 1-85. From Mr. Fawcett's data I have selected those only which are

TABLE VII.

## Average Stature of South Indian tribes.

Toda	...	169.6 cm.	Tamil Pariah	...	161.9 cm.
Coorg	...	168.7	Kanarese	...	161.8
Nāyar	...	165.1	Kurumba Mullu	...	161.1
Sheik Muḥammadan	...	164.5	Irula	...	159.8
Lambādi	...	164.3	Kammālan	...	159.7
Pattar Brāhman	...	164.3	Izhuvan	...	159.6
Badaga	...	164.1	Korama	...	159.3
Kuruba	...	163.9	Kurichchiyan	...	159.2
Malaiāli	...	163.9	Konga	...	159.0
Tiyan	...	163.7	<b>Yeruva</b>	...	<b>158.7</b>
Mukkuvan	...	163.3	Muppa and Kadir	...	157.7
Kota	...	162.9	Cheruman	...	157.5
Brāhman (Madras City)	...	162.5	Pāl and Urālī Kurumba	...	157.5
Palli	...	162.5	Paniyan	...	157.4
Vellāla	...	162.4	Kurumba, Bet	...	155.1
Nambūtri Brāhman	...	162.3	Polayan	...	150.6

TABLE VIII.

## Cephalic Index of South Indian tribes.

Coorg	...	79.9	Malaiāli	...	74.4
Korama	...	77.5	Vellāla and Kota	...	74.1
Konga	...	77.0	Paniyan	...	74.0
Kanarese Pariah	...	76.8	Cheruman	...	73.9
Kurichchiyan	...	76.7	<b>Yeruva</b>	...	<b>73.6</b>
Bet Kurumba	...	76.6	Tamil Pariah	...	73.6
Brāhman (Madras City)	...	76.5	Polayan	...	73.4
Nambūtri Brāhman	...	76.3	Nāyar	...	73.2
Sheik Muḥammadan	...	76.2	Toda	...	73.1
Kuruba	...	75.8	Palli	...	73.0
Lambādi	...	75.4	Izhuvan	...	72.7
Mukkuvan	...	75.4	Tiyan	...	72.7
Kammālan	...	75.0	Muppa	...	72.3
Irula	...	75.0	Badaga	...	71.7
Pattar Brāhman	...	74.5	Mullu Kurumba	...	70.3

averages for more than 25 individuals in each tribe, and in tribes like the Nāyars, of which he gives the averages of 25 individuals in each of 7 different divisions, I have worked out an average for the whole tribe. I am also responsible for the calculations showing the relation of cubit, span and chest to stature in the case of the Malabar tribes.



TABLE IX.

## Nasal Index of South Indian tribes.

Lambādi	...	69.1	Cheruman	...	78.1
Sheik Muḥammadan	...	70	Tiyan (S. Malabar)	...	78.9
<b>Coorg</b>	...	<b>72.2</b>	Konga	...	79.9
Vellāla	...	73.1	Tamil Pariah	...	80.0
Kuruba	...	73.2	Muppa	...	81.5
Toda	...	74.9	Izhuvan	...	82.5
Tiyyan	...	75.0	Irula (Thurston)	...	84.9
Kota	...	75.5	Mullu Kurumba	...	86.9
Nambūtri Brāhmaṇ	...	75.5	Pāl Kurumba	...	87.0
Badaga	...	75.6	Mukkuvan	...	87.1
Korama	...	75.7	Kurichchayan	...	87.4
Kanarese Pariah	...	75.9	Irula (Fawcett)	...	87.6
Pattar Brāhmaṇ	...	76.5	<b>Yeruva</b>	...	<b>89.6</b>
Brāhmaṇ (Madras City)	...	76.7	Kadir	...	89.8
Nāyar	...	76.7	Urāli Kurumba	...	93.4
Kammālan	...	77.3	Polayan	...	94.1
Tiyan (N. Malabar)	...	77.7	Sholiga	...	94.4
Malaiāli	...	77.8	Paniyan	...	95.1
Palli	...	77.9	Bet Kurumba	...	95.3

## Ratio of average span and average cubit to stature.

It has long been known that with regard to the length of the upper extremities the negro differs noticeably from the white man.<sup>1</sup> A similar, but less pronounced, difference distinguishes the aboriginal tribes of South India from the higher castes. The difference comes out in the measurements of the fore-arm (cubit), of the span (*grande envergure*), and of the vertical interval between the patella and the extremity of the hand when hanging free. Owing to an error discovered too late to remedy, my figures for the last-named measurement are not recorded; but by comparing the first two measurements, namely, the span and the cubit, with the corresponding determinations made by Thurston, we find that the Coorgs and Yeruvas maintain the positions indicated for them by the data given above. The average length of the fore-arm is expressed as a percentage of the average stature in the case of each tribe.

<sup>1</sup> Topinard : Anthropology (Eng. transl., 1894), p. 335.

TABLE X.

## Relation of Cubit to Stature in South Indian Tribes.

CASTE.	Stature.	Cubit.	$\frac{\text{Cubit} \times 100}{\text{Stature.}}$
Nambūtri Brāhman ...	162·3	44·2	27·2
Coorg ...	168·7	46·5	27·5
Kota ...	162·9	45·1	27·7
Toda ...	169·6	47·0	27·7
Nāyar ...	165·1	45·9	27·8
Kuruba ...	163·9	45·7	27·9
N. Malabar Tiyan ...	165·0	46·4	28·1
Badaga ...	164·1	46·2	28·1
Mulla Kurumba ...	161·1	45·2	28·1
Pattar Brāhman ...	164·3	46·2	28·1
Izhavan ...	159·6	45·2	28·3
Brāhman (Madras) ...	162·5	46·0	28·3
S. Malabar Tiyan ...	162·5	46·2	28·4
Palli ...	162·5	46·2	28·4
Pariāh ...	162·1	46·1	28·4
Kurichchyan ...	159·2	45·3	28·5
Malaiāli ...	163·4	46·6	28·5
Mukkuvan ...	163·3	46·7	28·6
Kadir ...	157·7	45·1	28·6
Yeruva ...	158·7	45·5	28·6
Irala (Fawcett) ...	158·3	45·4	28·7
Irala (Thurston) ...	159·8	45·8	28·7
Kurumba ...	157·5	45·2	28·7
Paniyan ...	157·4	45·3	28·8
Vellāla ...	162·4	46·9	28·8
Bet Kurumba ...	155·1	44·8	28·9
Kammālan ...	159·7	46·2	28·9
Polayan ...	150·6	44·2	29·3

## Relation of span to Stature.

According to Gould's measurements the percentage relation of the span to stature in the English is 104·4, whilst in the case of the Negroes it is 108·1. The width of the shoulders necessarily affects this method of comparing the relative lengths of the upper extremities, and introduces a source of variation and error; but the results are nevertheless in general agreement with the classification by the previous race tests, and Coorgs are again found to occupy a high position, whilst the Yeruvās are relegated to the more long-armed aborigines and people of low caste. It would be interesting to follow up these results by a determination on the skeleton of the humero-radial index which Sir William Flower has shown to mark a difference between his "Ethiopian and "Caucasian" types (*Journ. Anthropol. Inst.*, Vol. xiv., p. 378).

TABLE XI.

## Relation of Span to Stature in South Indian Tribes.

CASTE.	Stature.	Span.	$\frac{\text{Span} \times 100}{\text{Stature.}}$
<b>Coorg</b> ... ..	<b>168·7</b>	<b>174·1</b>	<b>103·2</b>
Toda ... ..	169·6	175·0	103·2
Kota ... ..	162·9	168·3	103·3
Kuruba ... ..	163·9	171·0	104·3
Badaga ... ..	164·1	171·7	104·6
Nambūtri Brāhman ... ..	162·3	170·0	104·8
Paniyan ... ..	157·4	165·2	105·0
Pattar Brāhman ... ..	164·3	173·0	105·3
Malaiāli ... ..	163·4	172·1	105·3
<b>Yeruva</b> ... ..	<b>158·7</b>	<b>167·3</b>	<b>105·4</b>
Bet Kurumba ... ..	155·1	163·7	105·6
Nāyar ... ..	165·1	174·6	105·8
Palli ... ..	162·5	172·6	106·2
Pariah ... ..	162·1	172·1	106·2
Kurumba ... ..	157·5	167·5	106·3
Irnla ... ..	159·8	169·8	106·3
Izhuvan ... ..	159·6	170·2	106·6
Brāhman (Madras) ... ..	162·5	173·3	106·6
Mullu Kurumba ... ..	161·1	171·9	106·7
Kadir ... ..	157·7	168·8	107·0
S. Malabar Tiyan ... ..	162·5	173·9	107·0
Kurichchian ... ..	159·2	170·4	107·0
Kammālan ... ..	159·7	171·0	107·1
N. Malabar Tiyan ... ..	165·0	176·7	107·1
Vellāla ... ..	162·4	174·1	107·2
Mukkuvan ... ..	163·3	175·2	107·3
Polayan ... ..	150·6	162·1	107·6

## Girth of Chest.

Measurement of the **chest-girth**, though subject to certain sources of irregular variation, and, though not in itself a character on which to base race classification, still shows, when compared with the stature, a general higher ratio for the aboriginal people and low castes than for higher types in South India. As a general rule, the chest girth is proportionately greater in the former than amongst the latter races, but the departures from this rule are sufficiently numerous to show that this character does not reliably divide the races.<sup>1</sup> The figures are—

<sup>1</sup> The circumference of the chest when compared with the stature shows a greater ratio amongst Europeans than amongst the people of India (see Topinard, English trans., p. 404).

TABLE XII.

## Relation of Chest-girth to Stature in South Indian Tribes.

TRIBE.	Stature.	Circumference of chest in cm.	Chest $\times$ 100 Stature.
<b>Coorg</b> ... ..	<b>168.7</b>	<b>82.2</b>	<b>48.7</b>
Nayar ... ..	165.1	80.4	48.7
Palli ... ..	162.5	79.2	48.7
Malaiāli ... ..	163.4	80	48.8
Kammālan ... ..	159.7	78	48.8
Tamil Pariah ... ..	161.9	79.3	48.9
Toda ... ..	169.6	83	48.9
Badaga ... ..	164.1	80.4	49.0
Vellāla ... ..	162.4	79.8	49.1
Cheruman ... ..	157.5	78.4	49.1
Muppa ... ..	157.7	77.4	49.1
Irula ... ..	159.8	79.4	49.7
Konga ... ..	159.0	79.2	49.8
Korama ... ..	159.3	79.4	49.8
Brāhman (Madras City) ... ..	162.5	81	49.8
Tiyyan ... ..	163.7	82	50.1
<b>Yeruva</b> ... ..	<b>158.7</b>	<b>79.5</b>	<b>50.1</b>
Kanarese Pariah ... ..	161.8	81.3	50.2
Lambādi ... ..	164.3	82.5	50.2
Pāl Kurumba ... ..	157.5	79.2	50.3
Kota ... ..	162.9	83	51.0
Kuruba ... ..	163.9	83.8	51.1
Kadir ... ..	157.7	80.5	51.4
Paniyan ... ..	157.4	81.5	51.8

**Facial Angle (Cuvier).**

Because of the striking difference between the prognathous Negro and the orthognathous classic Greek head, the facial angle has been given a value as a race characteristic which will not always stand the more delicate test of discriminating between the lower and the higher castes, or between the aboriginal Dravidians and the Hindu "Aryans" of India. The dolichocephalic Dravidian tribes are not a distinctly prognathous people as they have sometimes been represented to be. Moreover, the variations of facial angle for individuals in any tribes are so great that averages obtained on 25 subjects are probably not always accurate, and Thurston has apparently not considered this feature to be sufficiently important to record in his later work. There is a distinct difference between the Coorg and the Yeruva, but there are other tribes in South India which cannot be regarded as of a higher type than the

Coorgs and yet are equal or superior to them in orthognathism. The following measurements show the positions of the two tribes now under discussion :—

TABLE XIII.

**Facial angles of South Indian tribes.**

Badaga	...	...	71°	Irnla and Pariah	...	...	68°
Kota and Kammālan	...	...	70°	Paniyan and Toda	...	...	67°
Madras Brāhman, Palli and Coorg	69°	Yeruva	...	...	...	...	66°

## V.—VARIATION WITHIN THE TRIBES.

The above tables show that the Coorgs and Yerusas belong to two totally distinct ethnic branches; but in view of the fact that they have lived in close proximity, and almost domestic relationship with one another for a long period, I have scrutinized the records of each individual for evidences of a possible blood relationship in the near past. It may be stated at once that amongst the Yerusas, to their credit—either of moral rectitude or of physiognomical repugnance—no trace of Coorg blood is revealed in any of the measurements. Amongst those with Coorg names and assumed ancestry, two individuals show an uniform tendency towards the aboriginal characteristics, whilst there is a general tendency towards shading off in the direction of the Yeruva type when any one distinctive characteristic is considered. It is not intended by this last remark to suggest that there is actual Yeruva blood in any of the Coorgs; but it is highly unlikely that any of the higher castes in India are able to boast with certainty of complete freedom from the aboriginal black blood of the country, and even amongst the small number of individuals which I have measured amongst the Coorgs there are some which display a suspicious atavistic approach to the race of which the Yerusas are fairly characteristic members.

By selecting from amongst the 25 Yerusas, the 11 individuals who show a higher, that is a more leptorhine, type of nose than the average (89·6), and from these selecting the six who have a greater cephalic index than the average (73·6), we find that in other characteristics, such as stature, relative length of foot, fore-arm, span and girth of chest, they do not show any uniform variation in the Coorg direction. The following table shows the chief characteristics of these six individuals:—

TABLE XIV.

**Measurements of 6 Yeruvas whose nasal indices are less and cephalic indices greater than the average.**

SUBJECT.	Nasal index.	Cephalic index.	Stature.	Span.	Girth.	Foot length.	Cubit.
				Relative to Stature (=100).			
Kada ...	80	75	154	103·9	51·3	14·9	28·2
Nambi ...	81	77	158	104·4	49·4	15·1	28·6
Jogy ...	89	74	158	105·1	47·5	15·1	28·7
Belli ...	84	75	159	107·5	50·3	16·3	29·2
Murria ...	85	81	159	103·8	48·4	14·5	28·7
Nunja ...	89	77	157	105·7	50·3	10·0	28·8
Average for 6 ...	84·7	76·5	157·5	105·1	49·6	52·2	28·7
Average for the tribe ...	89·6	73·6	158·7	105·4	1·05	15·1	28·6

Similarly, if we take the individuals who vary on the opposite side of the average nose and head measurements, we find that there is no general concomitant variation in the assumed aboriginal direction. Thus there are 13 Yeruvas with nasal indices greater, that is more platyrrhine, than the average, and if we select from these the five which have also a head more dolichocephalic than the average, we get the following table of measurements :—

TABLE XV.

**Measurements of five Yeruvas more platyrrhine, and at the same time more dolichocephalic than the average.**

SUBJECT.	Nasal index.	Cephalic index.	Stature.	Span.	Girth.	Foot.	Cubit.
				Relative to Stature (=100).			
Kallinga ..	95	68	163	101·9	47·9	15·1	27·6
Bidda ...	95	70	154	105·2	52·0	15·1	28·3
Dod Nunja ...	93	70	155	105·2	49·7	15·3	28·5
Pileye ...	90	73	161	101·9	50·3	14·7	28·0
Buswa ...	90	73	164	107·3	49·4	16·0	29·1
Average for the 5	92·6	70·8	159·4	104·3	49·9	15·2	28·3
Average for the tribe ...	89·7	73·6	158·7	105·4	50·1	15·1	28·6

These five, therefore, whose noses are so wide and heads so narrow, show in their other measurements characters which sometimes vary in one direction and sometimes in the other.

Analysis of the figures for the Coorgs give a similar teaching: if we regard the leptorhine and brachycephalic tendency of the Coorg as characters opposed to his platyrhine, dolichocephalic neighbour, we find that the individuals who exhibit these "higher" traits most strongly are not uniformly "higher" in other respects, and, conversely, those who exhibit the aboriginal type of nose and head more than the average are not found to be more aboriginal in other respects, than their compatriots. This last statement is true *on an average*; but there were two individuals amongst the Coorgs I measured who *do* show a uniform tendency towards the aboriginal type, and one of these, whether by chance or the outcome of nature, has been decided by law to be a criminal. The measurements for these two are given below, and as one of them is recognised as a respectable member of his own community, I have suppressed his name so that this passing remark may become no handicap to his career as a Government official.

TABLE XVI.

**Coorgs who are more platyrhine and at the same time more dolichocephalic than the average.**

SUBJECT.	Nasal index.	Cephalic index.	Stature.	Span.	Fore-arm	Foot.	Chest.
				Relative to Stature (= 100).			
No. 25 ...	74	76	167	103.6	28.6	15.2	49.7
" 27 ...	76	79	177	101.1	26.8	14.7	44.6
" 28 ...	83	77	159	103.1	27.9	15.2	50.9
" 4 ...	75	78	171	100.0	26.3	14.7	50.9
" 5 ...	86	78	165	104.9	27.9	15.3	51.5
" 8 ...	79	78	166	104.2	28.1	15.2	49.4
" 14 ...	74	78	176	102.8	27.5	14.3	46.6
Average for the 7	78.1	77.7	168.7	102.8	27.6	14.9	49.1
Average for all Coorgs	72.1	79.9	168.7	103.2	27.6	14.8	48.7

These figures show that although seven subjects have noses and heads more in conformity with the aboriginal type than their compatriots, they show on an average no uniform tendency to imitate the aboriginal type in other race characteristics. Two of them, however,



Nos. 28 and 5, possess suspiciously wide and short noses, and with these aboriginal traits they are more dolichocephalic, lower in stature and possess longer fore-arms, longer feet, wider spans and larger relative chest-girths than the average of their tribe.

Taking the subjects who are more leptorhine and brachycephalic than the general run of the Coorgs, we find, similarly, that they do not show any uniform departure in other characteristics from the Coorg average. There are 18 Coorgs more leptorhine than the average, and of these 7 have an unusual tendency towards brachycephalism. The following table shows their measurements:—

TABLE XVII.

**Coorgs who are more leptorhine and at the same time more brachycephalic than the average.**

SUBJECT.	Nasal index.	Cephalic index.	Stature.	Span.	Fore-arm.	Foot.	Chest.
				Relative to Stature (= 100).			
No. 17 ...	66	84	172	100.0	27.3	13.9	48.3
" 18 ...	68	82	164	103.1	27.4	15.3	47.0
" 9 ...	69	88	160	103.7	27.4	14.5	50.6
" 21 ...	70	82	177	105.6	28.5	15.0	46.3
" 23 ...	70	89	158	105.7	28.1	14.9	51.3
" 29 ...	70	80	169	103.0	27.9	14.7	51.5
" 10 ...	68	81	175	105.2	27.5	14.3	50.8
<i>Average for the 7</i>	68.7	83.7	167.9	103.7	27.7	14.7	49.4
<b>Average for the tribe ...</b>	<b>72.2</b>	<b>79.9</b>	<b>168.7</b>	<b>103.2</b>	<b>27.5</b>	<b>14.8</b>	<b>48.7</b>

Amongst tribes which are the result of comparatively recent intermixing of totally different types we usually get a considerable amount of variation amongst individuals, and we require consequently a larger number of subjects to give an average measurement for the whole tribe. The foregoing analyses show that even when special subjects are picked out, having a combination of two peculiarities, they conform generally to the average in other respects, and we may take it for granted that in tribes which are not the result of immediate mixture, or half-breeds, 25 subjects taken at random give a very precise average. Amongst the pure aboriginal tribes a correct average will be obtained with fewer subjects than in mixed races, where individual variation is more frequent and pronounced. A comparison of the figures for the Coorgs and Yeruvas suggests a blood mixture in the

former tribe, whilst the latter are a very compact pure race, with a comparatively limited degree of individual variation. This point is especially well expressed by a diagram, grouping say the heads, noses, or some particular feature in which the two tribes show a striking contrast on the average. Taking the cephalic measurements, for instance, we find a much greater variation amongst the Coorgs than amongst the Yeruvás:—

TABLE XVIII.  
Classification of heads.\*

INDEX.	Dolichocephalic under 75·01.	Sub-Dolicho 75·01—77·77.	Mesaticeph. 77·78— 80·00.	Sub-brachy. 80·01—83·3.	Brachyceph. Above 83·33.
Coorgs ...	3	7	11	4	7
Yeruvás ...	19	5	...	1	...

The Coorgs show, as might be expected from their high average index, a larger proportion of brachycephalic individuals (7 out of 32) than any South Indian tribe. Of those measured by Thurston one Tamil Brahmin and two Korámas are the only brachycephalic skulls hitherto detected amongst these tribes.

The one aberrant Yeruva—Murria by name—shows a sub-brachycephalic index on account of the unusual shortness of his head, the breadth being exactly the average of his tribe. There was nothing in his features or general appearance to arouse suspicion, and the other measurements of the body do not show an uniform departure from the Yeruva type.

By grouping the nasal indices we find that there is a less noticeable difference between the two tribes in the matter of variation, but the Coorgs nevertheless show a tendency to trail out towards the aboriginal side.

TABLE XIX.  
Classification of noses.

INDEX.	61-65 A	66-70 B	71-75 C	76-80 D	81-85 E	86-90 F	91-95 G	96-100 H	Above 100 J
Coorgs ...	3	14	8	5	1	1	...	...	...
Yeruvás ...	...	...	...	1	5	9	7	2	1

\* Broca's scale.

This character is more clearly expressed by graphic representation of the groups (fig. 5). From this it will be seen that, whilst the majority of Coorgs have nasal indices between 66 and 70, which is not far from the usual European type, there are so many individuals with broad noses that the average is raised for the whole tribe to 72.1.

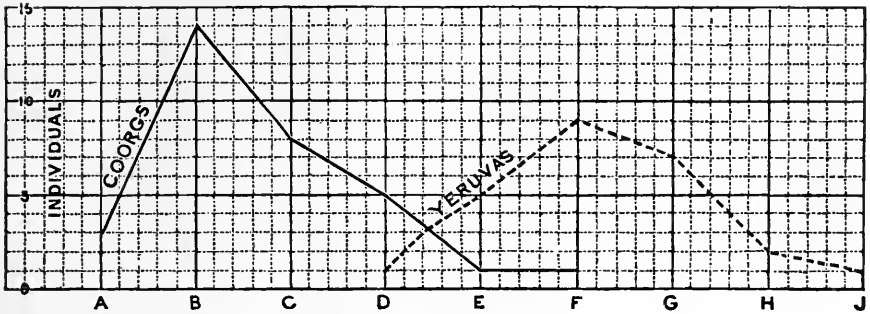


Fig. 5. Comparison of nasal indices for Coorgs and Yerusas.<sup>1</sup>

<sup>1</sup> Whilst I have no reason to suppose that the character of this curve would be materially changed with a large number of measurements, the graphic method should only be resorted to for critical purposes with a larger number of individuals. In this case the curve has been "smoothed" by grouping the nasal indices in fives.

## VI. SUMMARY.

The Coorgs and Yeruvas belong to two distinct ethnic types. The latter tribe falls into a group with the Kurumbas, Irulas, Paniyans and Kadirs, who are the South Indian cousins of the Kols and Gonds living on the central highlands—people of a very dark colour, curly hair, thick, slightly everted lips, feeble prognathism, distinctly platyrrhine noses (index 89·6) low stature (158·7 cm.) and comparatively long feet, long fore-arms, wide span and dolichocephalic skull (73·6).

There is an average general tendency for the higher Hindu castes to differ from this type by a less pronounced depth of skin-colour, a more leptorrhic nose, a greater stature, greater facial angle and less pronounced development of the fore-arms and feet. As a consequence, these characters are used in India as a general index to racial superiority, the higher castes claiming a considerable infusion of the blood introduced by the early Aryan irruption on the North-West Frontier. Measurements made on the Coorgs show that they possess these supposed superior characteristics in a more pronounced degree than many of the South Indian tribes who claim a higher caste position. The average height of the Coorg man is 168·7 cm. (5 feet 6½ inches), which is equalled only by the Todas (169·6 cm.) amongst the races of the south. Their nasal index (72·1) is of a higher type than any of the other tribes, except the nomadic Lambadis (69·1), who have a fair skin and speak an Aryan language, and the Sheik Muhammadans (70) who claim to be descendants of recent immigrants from the North. Regarded as percentages of stature, the Coorgs have a distinctly short foot, fore-arm and span. But the character which marks them off from all the other tribes of the south is their singular tendency towards brachycephalism, their cephalic index of 79·9 narrowly excluding them from Broca's class of sub-brachycephali. These characters, with their comparatively fair skin and general bearing, mark them off with unmistakable distinctness from the other races, who also speak Dravidian languages, and leaves the question of their ethnic relationship an unsolved problem.

## VII. EXPLANATION OF PLATES.

## PLATE I.

**Profiles of average Coorg and Yeruva men.**

The profiles are drawn to the same scale from the average measurements in the case of each tribe for height, length of head, length of nose, height of vertex above the intersuperciliary point, tragus and chin, facial angle, length of arm, height kneeling, and length of foot. As nearly as possible, too, the character of the hair, general facial expressions and usual modes of dress are represented. The plate is reduced by photography from the original drawing. The writer would suggest that this method of representing the physical characters of the tribes should when possible be adopted by the person who makes the measurements. It should be understood that no single individual ever represents the average of a tribe in all measurements, and for this reason photographs of individuals cannot convey a faithful impression to the ethnologist who is not content with a mere general impression.

## PLATES II AND III.

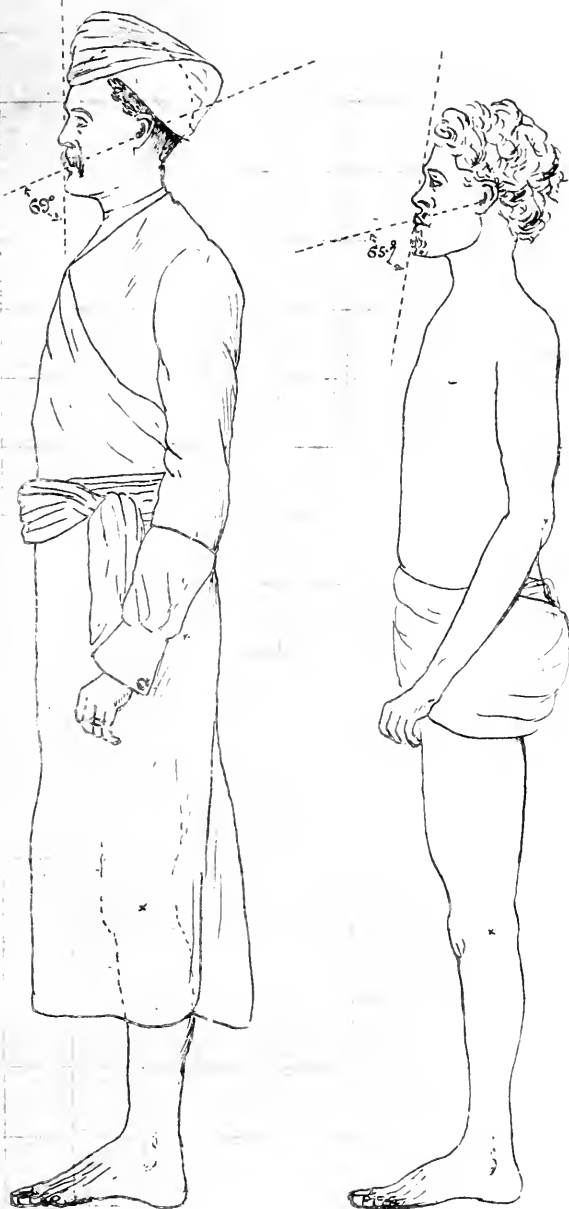
**Coorg dress.**

The full dress of a Coorg consists of a long coat (*kupasa*) of dark-coloured cloth, open in front and stretching to the calves. The sleeves are cut off below the elbows exposing the arms of a white shirt, which is now generally of the regulation English pattern. A brightly coloured kamarband is tied around the waist and knotted on the left front. Into this, on the right side in front, the small Coorg knife (*picha katti*) is stuck, its sheath, ornamented with silver or gold facings, is fastened by an ornamental cord or metal chain to the waist-band. The large broad-bladed Coorg knife (*odu-katti*) is now more rarely worn (Plate III). When carried it is fixed into a brass clasp at the back, with its point directed obliquely up towards the left shoulder. Like the *kúkri* of the Gürkha this large knife was a formidable weapon in the hands of the Coorg warrior engaged in a hand-to-hand fight. But it is now used only as a test of skill and strength on festive occasions, an *actual* test in competitions and a *nominal* one when, for instance, a bridegroom or the principal guest at a feast is expected to cut through the trunk of a plantain tree at one stroke. The full-dress puggaree is of peculiar design with flat top (Plate II), but it is now only worn by a few of the older men and would be regarded as affectation in the young Coorg.

## PLATES IV AND V.

**Portraits of Yerusas.**

Portraits of individuals never show the average characters of any tribe; but those of the Yeruva man and girl are sufficient to illustrate the unmistakable contrast which easily distinguishes any Yeruva from any Coorg. The portraits illustrate the platyrrhine type of nose, the thick, slightly everted lips without distinct prognathism, the well-marked superciliary ridges, high cheek-bones and the black, wavy, tangled hair which contrasts with the straight hair of the Coorgs. Yerusas seldom possess more than a few straggling hairs to represent a beard, whilst the Coorgs always show an abundant growth on the upper lip, face and chin.



10 20 30 40 50 60 70 80

Scale of Centimetres

PROFILES OF AVERAGE COORG AND YERUVA MEN.





Journal Asiatic Society of Bengal

Holland. Coorgs & Yeruvas.

Vol LXX, Part III, Plate II.



A COORG IN FULL DRESS

T. H. Holland delt.

Chromo-Litho by Thacker, Spink & Co. Calcutta



# JOURNAL ASIATIC SOCIETY OF BENGAL.

Holland : Coorgs and Veruvas, Plate III.

J. A. S. B., Vol. LXX. (1901), Part III., No. 2.



*Photo. by T. H. Holland.*

*Cellotype by Benrose & Sons, Ltd., Dorby and London.*

A GROUP OF COORGS.

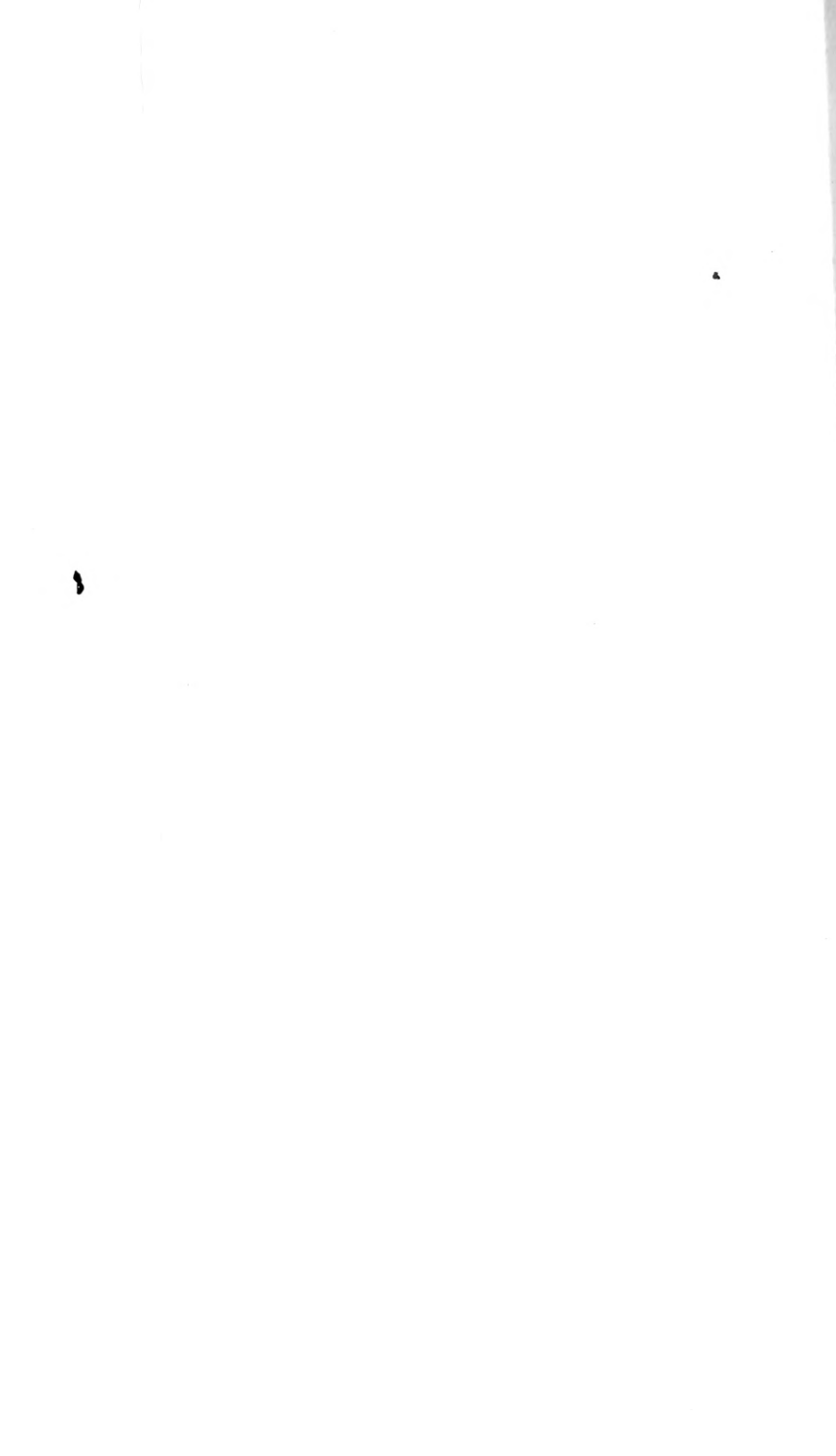




Photo. by W. Leavers.

*Group of Bengali Savan, Lohar, Pelly and London.*

YERUVA MAN AND GIRL.



# JOURNAL ASIATIC SOCIETY OF BENGAL.

Holland : Coorgs and Yeruvas, Plate V.

J. A. S. B., Vol. LXX. (1901), Part III., No. 2.



*Photo. by W. Leavers.*

*Collotype by Benrose & Sons, Ltd., Derby and London.*

**PROFILE OF A YERUVA GIRL.**





*From the Journal, Asiatic Society of Bengal, Vol. LXIV, Part I, No. 2.*  
1895.

*Tibbat three hundred and sixty-five years ago.*—By MAJOR H. G. RAVERTY,  
Bombay Native Infantry. (Retired.)

[Read April 1895.]

At the present time the exploration fever in Asia appears to be chiefly directed towards Tibbat,<sup>1</sup> miscalled “Thibet,” “Tibet,” and the like, therefore it may be interesting to give an account of that region—of its western and northern portions chiefly—as it was seen by its first explorer nearly four centuries since.

I refer to the Mughal Prince, the Mirzā, Muḥammad Ḥaidar, the Gūrgān, of the Dōghl-āt tribe of the Mughals, son of the Mirzā, Muḥammad Ḥinsain, the Gūrgān, who held the Government of Shāsh, or Tāsh-kand, on the part of the sovereign of Kāshghar, to whom he was related, Muḥammad Ḥaidar’s father being descended from Amīr, Bulācī, the first Amīr of Kāshghar who embraced the Muḥammadan faith. Sulṭān Sa’id Khān, the ruler of Kāshghar and Khutan, and their dependencies, at the period I am writing about, and in whose service Muḥammad Ḥaidar was, and to whom he was also related, married his sister, and gave him his own sister in marriage, hence Muḥammad Ḥaidar, like his father, and many others, not Amīr Timūr alone, as has been commonly supposed, is styled *Gūrgān*, that is to say, one who has married into the family of the reigning sovereign. Muḥammad Ḥaidar’s mother, likewise, was the younger sister of Zahiru-d-dīn, Muḥammad Bābar’s mother, they being the daughters of Yūnas Khān, who held the Government of Andījān, the capital of which was Shāsh or Tāsh-kand, and who was a direct descendant of Caghatāe Khān, one of the sons of the Cingiz or Great Khān of the Mughals.

Before giving Mirzā Ḥaidar’s account of Tibbat<sup>1</sup> it may be well to refer briefly to what the old Muḥammadan writers say about it, but,

<sup>1</sup> The word is spelt by all eastern writers, <sup>تبت</sup>—Tibbat—and in no other way.

The actual meaning of the word is “fine wool,” which is obtained from the roots of the hair of goats, and which is woven into fine and soft fabrics—*shāls*—which is the signification of this latter word.

unfortunately, they are much more brief in their accounts than we could have desired.

‘Ubaidu-l-lāh, son of ‘Abdu-l-lāh, son of Khurdād-Bih, who died in 300 H. (912 A.D.), in his *Kitābu-l-akhbar*, as quoted by the Gardāizī in his *Zainu-l-akhbar*, mentions the well-known tradition of the Ḥamirī rulers of Yaman in Arabia having invaded Māwarāun-nahr, and also of the invasion of Tibbat by one of the same race. ‘Ubaidu-l-lāh states, that there was a prominent man among the Banī Ḥamir whose name was Ṣābit, who was much trusted and depended upon by the Maliks of Yaman, whom they style Tubbā’yawa’. On Tubbā’ conferring the lieutenantcy, or vice-royalty of the country upon Ṣābit, the latter’s mother sent him a missive, saying: “One of the Tubbā’yawa’ set out towards the east, and used great efforts until he reached a country the verdure of which was gold, and its earth musk, and its grass (herbage) incense [fragrance, also the plant cinque foil, called the “Khik-i-Maryam” or “Panjah-i-Maryam—the Virgin Mary’s Palm,”], its game the musk deer, its mountains snow, and its plains most pleasant.” When Ṣābit read this missive he became very desirous of proceeding thither; and having fitted out a large army, he set out towards that country. When he reached Tibbat he found that all he had been told was correct. \* \* \* \* He remained in that part, and got the title of Khāqān. \* \* \* \* But the route into Tibbat from Khutan,<sup>1</sup> until you come out on it, lies over lofty mountains, which contain inhabitants, and in those mountains are numerous animals, consisting of sheep, cattle, and wild sheep.<sup>2</sup> From thence you reach Sālsān [سلسان in another MS.], beyond which a bridge has been placed from one side of a mountain to another.<sup>3</sup> They say in

<sup>1</sup> Khutan, not “Xhoten,” for the letters with which it is written will not admit of such a mode of writing or pronunciation—according to the Tibbatī traditions, was anciently called *Wu-than*, at which period it was one of the strongholds of Buddhism. “Counting the *wihārs* in and outside the city of Wu-than, there were sixty large *wihārs*, ninety-five of medium size, and four-hundred and forty-eight temples.” See “*Journal*” for 1886, page 195.

<sup>2</sup> The *queqār*, also called the snow sheep.

<sup>3</sup> When Mīrzā Abā Bīkr, defeated by Sulḥān Sa’īd Khān in 920 H. (1514 A.D.), had to fly from Yār-kand, he retired to Khutan, but finding it was impossible to remain there, he retired towards the Qarā-naqū Tāgh. On arriving there, hearing that the Mughals were in pursuit, he again fled after destroying as much of his immense baggage as he could, and pouring his treasures into the river Akāsh, which flows through Qarā-naqū Tāgh, from the top of the bridge; as the road was very narrow, and his flight was impeded by the immense amount of baggage and treasure, he took only such things along with him as could conveniently pass by that narrow route. He then set out; and when his pursuers reached his last halting place, they found that he had crossed the Qarā-naqū Tāgh, and had entered Tibbat.

this wise, that the Khutan people erected it in ancient times. Beyond this bridge of Tibbat Khāqān, there is a mountain range, that, when people begin to ascend it, it will take their breath away [*dam-i-mardamān ba-gīrad*]. The name of this malady it will be observed, is *dam-gīrī* from Persian *dam*, 'breath', and *gīrī*, 'taking', 'seizing', etc., from the verb '*gīrīftan*' to seize, etc.], so that they cannot breathe, and their tongues become heavy, and many persons die thereof. The people of Tibbat call this range the Kōh-i-Zahr, or Poison Range. When people proceed to Kāshghar from thence [Tibbat], they go by a direct route between two ranges of mountains to the east [sic. in *MS.*], and pass over it, and reach a tract of country which they call Ūz-kand. This tract is forty *farsakhs* in extent, and half of it is mountain, and the other half is very rough and furrowed.

The chronicler, Abū Ja'far, Muḥammadu-ṭ-ṭabarī, who wrote about the same time as the writer just quoted, relates, that Shamir, surnamed Zū-l-jaṇāḥ, a nephew of Tubba'u-l-aṣghar, the Ḥamīrī king of Yaman, invaded China. It came about in this wise, that the ruler of Hind sent his ambassador to Shamir with presents, consisting of silken fabrics, frankincense, musk, and other rarities. Shamir inquired if all these precious things were the produce of Hind, and was told that most of them came from Cīn, a country the 'Arabs had not before heard of. Shamir was so stimulated from the account given to him of Cīn, that he resolved to undertake an expedition into that country. Some other writers, like 'Ubaidu-l-lāḥ, just quoted, say, that Shamir was commanded to undertake this expedition by one of the kings of Yaman, whom the others say was Tubba'u-l-aṣghar, but he lived many years subsequent to Shamir. The Ḥamīrī prince is said to have led an army under one hundred standards, and under each standard were one thousand men, across the Jīḥūn from the territory of Balkh, and from thence to the frontiers of Hind,<sup>1</sup> where he himself remained while he despatched part of his forces against Cīn. This force having been defeated by the Cīnīs, Shamir resolved to proceed in person with the rest of his army, and he set out through the country of Turkistān, skirting the territory of Tibbat, in which he left a force of 12,000 men as a reserve. Shamir succeeded in Cīn, and returned from thence

The name of this mountain still exists, but, in Walker's map of Turkistān it appears as the name of a halting place, under the name of "*Karangotak*," about one hundred and three miles south of Khutan, and the bridge over the Akāsh river was immediately north of it. The narrow route, and the bridge appears to be the same as noticed above.

<sup>1</sup> The *Ṭabaqāt-i-Nāṣirī* says he went by way of Kābul to the frontiers of Hind.

through Turkistān towards Hind [the borders are doubtless meant, and by a different route from that by which he went], with a vast amount of booty; and from thence conducted his forces back to Yaman, having been absent on this expedition for a period of seven years. "Those 12,000 men were never withdrawn from the skirts of the territory of Tibbat; and vestiges of them are still to be found in Turkistān in that direction." The Tājziks of Tūrān are their probable descendants.

Shamir is also said to have destroyed, at the outset of this expedition, the ancient capital of the Sughd, and to have founded another town in its place, which was named Shamir-kand, *kand* in Turkī meaning a town, which 'Arabs change to *qand*, and which in course of time grew into a city, and its name to Samr-qand. According to the chroniclers quoted, Shamir lived in the time of Kai-Gushtāsib and Bahman, rulers of Ī-rān-Zamīn. It was the former who removed Bukht-un-Naṣṣar (Nebuchadnezzar) from the government of Bābal, for his cruelty towards the Banī Isrā'īl.

The 'Ajā'ibu-l-baladān says much the same as uṭ-Ṭabarī respecting the Tubbā'yawa' invasion.

The "Kitāb-i-Masālik wa Mamālik" says: "If one desires to proceed from the east [Cin] towards the west, by the country of the Nāemāns, the territory of Khirkhiz, the Taghar-i-Ghuzz, and Kimāk, towards the sea, it is a journey of nearly four months. \* \* \* \* The country of Tibbat lies between the land of Khirkhiz and the kingdom of Cin. Cin lies between the sea, the land of the Ghuzz, and Tibbat, etc."

Ibn Ḥauqal who finished his work in 366 H. (976 A.D.), states, that he saw a gate at Samr-qand, the front of which was overlaid with iron, and on it was an inscription in the Ḥamīrī language, saying, that "from San'a to Shamar, or Samr-qand, is a distance of one thousand *farsakhs*."

The Tasmīyatu-l-baladān says that in those early times Samr-qand was called Cin!

In his history, entitled the "Tārīkh-i-Rashīdī," the Mirzā, Muḥammad Ḥaidar, first refers to Tibbat in the following words.<sup>1</sup>

"On the west side of Kāshghar likewise, a great range extends, which branches off from the mountain ranges of Mughalistān, and runs from the north towards the south. The writer of this work has traversed the mazes of this great range for a distance of six months' journey, and even then had not reached the extremity thereof, as will presently be explained." \* \* \* \*

<sup>1</sup> I may mention that I translated this account of Tibbat from Mirzā Ḥaidar's work some seventeen years ago; and other extracts have appeared in the *Translation of the Tubaqūt-i-Nāṣirī*, and my *Notes on Afghānistān*, etc.

He subsequently gives the following account of his expedition into Tibbat, which I will render in his own words.

#### ACCOUNT OF THE HOLY WAR IN TIBBAT.

“Sultān Saʿīd Khān having come to the determination of undertaking a holy war against the infidels of Tibbat, it is necessary to give some account of that country. It lies in such a position that few travellers can manage to reach it, on account of the exceeding difficulty of the routes. It is a maze of mountains and valleys, rough, and furrowed with formidable passes and tremendous defiles; and is, in every respect, a most difficult and inhospitable region. What from the excessive keenness of the air, the paucity of forage, the scarcity of fuel, and the lawless and obdurate people who infest the routes and plunder those who happen to fall in their way, there are few travellers who have effected a passage through it.<sup>1</sup> It is on this account, probably, that Tibbat is not mentioned in such trustworthy books as the “*Muʿaj-jamu-l-baladān*,” the “*Jām-i-Gitī*,” the “*Mulḥaqāt-i-Šūrah*,” and others, the authors of which have not described Tibbat as other countries have been described therein, and have contented themselves with a brief summary respecting it, but from which, what Tibbat really is, is not to be gathered in the least. For this reason, I have the boldness here to endeavour to show and set forth what the territories included in Tibbat really consist of, and to furnish other information respecting it which is not obtainable from books.

“The region called Tibbat is a vast tract of country in length between north and west (N. W.), and south and east (S. E.), eight months’ journey, but the breadth of which does not exceed a month’s journey, and not less than ten days’ journey.<sup>2</sup> The north-west boundary adjoins Bilaur, the position of which has been previously given; and on the south-east Tibbat extends to Khōjū and Sālār, which are among the dependencies of Kanjān Qū-i of Khīā, as has been already detailed in the account which I have given of the mountain ranges of Mughalistān and Kāshghar;<sup>3</sup> for the principal mountain range of

<sup>1</sup> But in these days, the “new woman” finds her way all about this, as well as other out-of-the-way countries, not liking ‘home.’

<sup>2</sup> The Tibbatī writers consider all Tibbat to constitute what is known to the ancient writers as “*Jambu Dwīpa* ;” and that to the east and north-east of Tibbat Proper, that is, “U” and “Thsang,” lies in the country of Great Tibbat. “Central Tibbat” they called “*Dvus*,” the first and last letters of which in italics, according to the Tibbatī mode of writing, are not pronounced.

<sup>3</sup> In the same way as with regard to Tibbat, people will, down to almost the most recent traveller, persist in calling this place and its territory “*Kashgar*,” which, of course, is incorrect. We can from this imagine how other names must be vitiated by them.

Mughalistan,<sup>1</sup> the whole of which branches out in different directions, passes north of Kāshghar, bends down to the west of that territory, and then bending southwards again, passes south of Kāshghar. The territory of Farghānah also lies to the westward of Kāshghar, and this very range here referred to lies between them. Thus the portion lying between Kāshghar and Farghānah is called Ālāe. Badakhshān lies to the west of Yār-kand, and there likewise the range in question lies between; and this last portion of it, lying between Yār-kand and Badakhshān is called the Pā-mīr,<sup>2</sup> which, in some places, is seven or eight days' journey in breadth. After it passes beyond this [southwards], there are some of the mountain skirts [hill tracts] of Yār-kand, which adjoin Bilaur, such as Rās-kām and Tāgh-i-Dūm Bāsh. When it has passed beyond this again, then comes the region of Tibbat. Badakhshān lies on the summer west [*i.e.*, the direction in which the sun sets in the height of summer] of Yār-kand, as previously mentioned, and Kashmīr lies on the winter west of Yār-kand; and the very same range of mountains runs between them. That portion of it which lies between Yār-kand and Kashmīr, is that part of the region of Tibbat which is known as Bālti.<sup>3</sup> In the same manner as this range is very broad from the Ālāe Pā-Mīr, in Bālti it is still more so, being twenty days' journey in breadth. For example, the pass ascending into it on the side of Yār-kand is the 'Uqbah, or Pass, of Sānjū, and that for descending from it towards Kashmīr is the 'Uqbah, or Pass, of Skārdū or Iskārdū, and between these two Passes the distance is twenty days' journey. In the same way, on the winter west of Khutan some of the districts and provinces of Hind lie, such as Lāhōr, Sulṭān-pūr, and Māci-Wārah; and that same range of mountains previously mentioned lies between. That portion which lies between Khutan, and the before-mentioned places [*i.e.*, between Khutan and Hind] belongs to the country of Tibbat, such as Ardūk, Kōkah, and Asbatī.

"In the same manner, it is necessary to understand, that west and south of the great range which I have previously mentioned as termi-

<sup>1</sup> Which the Chinese style *Thian-Shān*.

<sup>2</sup> In one of his recent letters—the last I think—to *The Times* on "The Pamir Question," M. Vambéry says: "I must begin by alluding to the rather curious fact that the name *Pamir*, as a geographical denomination, is utterly unknown in *Turkistan*. It does not occur in any of the historical records extant." Here is a proof of it, as may be found in many "records extant;" but no such term applied to it as "*Bām-i-Dunya* (roof of the world)" can be shown in any oriental record whatever: the term is a purely European invention.

See my *Notes on Afghānistān*, etc., page 295–307, for what Bilaur consists of, and where it lies.

<sup>3</sup> In another place he says Bālti is a territory lying between Bilaur and Tibbat.

nating on the south-east as far as Khojū and Sālār, dependencies of Qām-jū and Suk-jū-i of Khiṭā,<sup>1</sup> is Hindūstān; and that from Bahrah and Lāhor to Bangālāb, the whole lie on the southern skirts of this great mountain range. All the rivers of Hind flow out of it; and the whole of the region of Tibbat follows, and is conformable with, the courses of all those rivers [on those sides]. To the north and east of Tibbat are Yār-kand, Khutān, Jar-jān [“Chārchand” of A—K’s explorations and map], Lōb, Kanak, and the Sārigh Ī-ghūr, and the rest is sandy desert, the boundary of which adjoins Qām-cū and Suk-jū-i of Khiṭā.

The rivers issuing from the mountains of Tibbat flowing towards the west and south, are all rivers of Hind, such as the Nil-Āb, the Āb-i-Bahrah [the Bihat or Jihlam], the Cin-āb, the Āb-i-Lāhōr [the Rāwī], the Āb-i-Sultān-pūr [the Bīah, which in the author’s day flowed close to Sultān-pūr], and the Āb-i-Bij-Wārah [the Sutlaj ?], the combined volumes of which rivers signify, in other words, the Daryā-i-Sind [Indus]. On the other hand, the Jūn [or Yamūnā, *vul.* “Jamna,”], the Gang, and other rivers, all enter Bangālāh, and unite with the ocean; and all that flow out of the mountains of Tibbat towards the east and north, such as the river of Yār-kand [Zar-Afshān],<sup>2</sup> the Āq-Qāsh, the Qarā-

<sup>1</sup> The Fanakatī says: “What the people themselves call Khān-zjū Khān-qūe, which the Mughals call Jāqūt, or Jah-qūt, and Hindūs call Cīn, and we people of Māwarā-un-Nahr call Khiṭā or Khiṭāe.” See Tubaqūt-i-Nāsiri, page 912.

<sup>2</sup> In the article on the “Pevtsof Expedition,” in the Geographical Journal, for July, 1893, we learn with respect to the “Yarkand-daria,” that the Russian spies were unable to carry their observations farther south than “Ish-debeh”:—“Unfortunately no contemporaneous observations were made, and therefore no positive conclusions could be formed. The Yarkand-daria is the chief river of Eastern Turkestan; its course is upwards of 1,300 miles long, and the determination of its sources is an interesting geographical problem,” page 62.

As to this “problem,” Mirzā Haidar says, in another part of his work, that “The water of the river of Yār-kand is the best of the waters of the world (in purity), and all the praises which physicians and sages have bestowed upon it are true and just. At the distance of one month’s journey it issues from the mountains of Tibbat, and originates from the melting of snow and ice [from a glacier?], and flows from south towards the north over rocks and sand, and with great swiftness. When it reaches Sārigh Kōl, which is the name of a well known territory of Kāshghar, its rapidity increases, and it dashes, and is dashed, against rocks and stones, and flows towards the east for a distance of seven days’ journey, until it reaches more level, open ground, and then flows for a distance of two days’ journey more in a stony, rocky bed, with great rapidity, until it reaches Yār-kand,” etc., etc.

According to the Survey Report, written nearly a century since, repeatedly quoted by me in my Notes on Afghanistan, “the interesting geographical problem” was then solved. It states, that after leaving the pass over the Qarā-Qaram range towards Yār-kand, instead of keeping towards the north towards the



Qāsh, the Āb-i-Kiriah ["Kiria" of A—K's explorations], and Āb-i-Jar-jān,<sup>1</sup> all empty themselves into the Lōb Nāwar [or Lōb Lake, which geographers will persist in calling Lob-nor<sup>2</sup>], which Lōb Nāwar is a great lake in the vast sandy desert tract which has been previously referred to. From some Mughals who knew this lake, I heard that it takes three months to go round about it, and that from the lower part of it issues a great river which is known by the name of the Qarā Nūrān [Mūrān?] of Khitāe.

"From this description it will appear that Tibbat occupies a very elevated position, because the waters issuing from it, all fall down in every direction; and from whatever side a person desires to enter Tibbat, it is necessary to do so by ascending lofty passes which have no subsequent descent; and when you reach the summits the ground is comparatively level.<sup>3</sup> In some of the passes there may be a little

Sānjū Pass, you keep more to the left, and in four stages reach Kahaplū-Aghzah (referring probably to the place of many spurs, or many mouths or exits, and ascents).

Leaving Kahaplū-Aghzā (the "Kapaloong" of some maps), another five stages take you to Cirāgh Shāh, (the "Chiraghsaldee" of some maps), another now desolate halting place; so called after some Sayyid, and by the way, meet with much water, and many grassy tracts. There are springs of water here in all directions; and the water from them having united, and having been joined by other small tributaries, flows towards the north, towards Yār-kand, and receives the name of Zar-Afshān.—"The Disperser or Scatterer of Gold." It is after this that its velocity becomes so great.

The next stage onwards from Cirāgh Shāh leads over the Kūdū Dabān, or Dawān, or Pass (the "Yangee Dewan" of some maps, and Yangi Pass of others). Dabān or Dawān—"b" and "w" being interchangeable is the Turkish for a pass. This pass is of great elevation, and here the territory of Tibbat-i-Kalān or Great Tibbat terminates.

<sup>1</sup> As Mirzā Haidar makes a difference between the letters 'j' and 'c' when necessary, I have left his words as they are written. This place is A—K's "Chār-chand," but I prefer the Mirzā's mode of writing.

<sup>2</sup> Nāwar is the Turki for a lake, not Nōr. Vast physical changes must have taken place since the Mirzā wrote; for we are told, that, according to the statements of M. Bonvalot, "it may be said that Lōb-Nōr has no existence in name or in fact; that there only exists beds of reeds and sand dunes, and that the largest sheet of water is called the Kara Buran."

The "Kara Buran" here mentioned, is Mirzā Haidar's great river, the Qarā Nūrān [Mūrān?].

<sup>3</sup> Although Mirzā Haidar does not expressly mention by name "the newly-discovered Altyn-tagħ mountains [the Āltān Tāgh, or Āltān range]" of Prejevalsky, and the discovery that "the northern barrier of the Tibetan plateau," advanced "to the meridian of Lōb Nōr 3° farther to the north than had hitherto been supposed," but from what he says here, the Mirzā was perfectly cognizant that Tibbat extended thus far north, and that its northern barrier consisted of mountains—a cross

inclination downwards, but not much. On this account Tibbat is excessively cold, in such wise, that in most places, with the exception of barley and turnips, nothing else is cultivated. The barley, too, is such as is for the most part grown and ripened in the short space of forty days, if at first, the cold of a long winter does not prevent the seed coming up soon. In most places in Tibbat grass continues green for two months; and in some places therein, although the summer season is nominally forty days, it is after such a fashion, that, after midnight, the rivers and streams freeze; and throughout Tibbat the keenness of of the air is so great, that no tree, indeed not even grass, attains any height: all is stunted in growth.

“The inhabitants of Tibbat are separated into two divisions. One is called *Löl-Pā*, that is to say, dwellers in villages or hamlets, and the other *caubak*, that is *ṣahṛā-nāshīn* or nomads; and they pay obedience to one or other of the governments or provinces of Tibbat. These nomad people have some astonishing customs, such as are not followed by other races of people. The first is, that they devour flesh and all other food in a raw state, and have no custom of cooking whatever.<sup>1</sup> Secondly, in place of corn, they give their horses flesh; and thirdly, all their burdens, baggage, utensils, and the like, they put on the backs of sheep, each of which carries a load of about twelve legal *manns*.<sup>2</sup> The sheep have saddle bags, crupper, and breastplate, fitted and fastened on to them, and they load them with as much as they can possibly carry. They never take off these loads except out of necessity [from the beginning to the end of a journey]; and winter and summer the load is kept fastened upon their backs.

range—stretching from the Pā-mīr portion of the great range he has described, for several degrees farther eastwards, and passing Lōb Nāwar on the south. Indeed, the middle route from Yār-kand by *Khutan* to *Khītāe* in those days skirted the northern slopes of that very range; and the Cingiz *Khān* returning from the neighbourhood of Peshāwar by Bāmīān and Buqlān into Māwarā-nn-Nahr and Turkistān, moved against Tingqūt by this same route. See *Ṭabaqāt-i-Nāṣirī*, note to page 981.

The Fanakati, in his history, says, with reference to the excessive elevation of Tibbat and its mountains, that the following line of the poet, Firdausī, is applicable to them, for from them

“Of the fish [which supports the world] thou seest the belly, and of the moon the back.”

<sup>1</sup> Græber also says: “The people of Barantola are very slovenly, for that neither men, nor women, wear shirts, or lie in beds, but sleep on the ground: That they eat their meat raw, and never wash their hands or faces,” etc.

<sup>2</sup> The *mann* is a small one, and varies, it is said, in Tibbat, from 2lbs. to 6lbs. Hamilton says, in his account of Bengal and its trade with Tibbat, that the load for a sheep is from 12 to 20 lbs.

“The mode of life of the Canbahs or nomads is after this manner. In winter they descend from the mountain parts before named towards the west and south, which is Hindūstān, and bring down with them Khiṭāe goods, and musk, and *lanah-kār* or *lanah-gār* [borax], *māh-farfīn* [purslain], *qūṭās* [*yāḥ* tails], gold, and *shāl* [fabrics], which are Tibbatī goods and merchandize,<sup>1</sup> and carry on traffic with the Hindūs of the mountain skirts of Hindūstān. From thence these Canbahs purchase and take home with them goods and manufactures of Hindūstān, such as clothing [piece goods for clothing], sweets, rice, wheat, etc., with which they load their sheep, and in the spring set out on their return to Tibbat, there being forage obtainable then, and their sheep numerous. They proceed leisurely, allowing the sheep to graze by the way, without interruption, and without stoppage, and reach Tibbat in the summer. Then, collecting such produce of Tibbat as may be saleable in Khiṭāe, they load their sheep and convey these articles, along with the products of Hindūstān they had brought with them [over and above what they required for home use], and set out towards Khiṭāe, and spend the following winter therein. Having then disposed of their Hindī and Tibbatī goods, they again collect the products of Khiṭāe, and set out for Tibbat in the following spring, and again reach it in the summer. They then collect such products of Tibbat as they require, and with them and the Khiṭāe ladings, they descend as before into the lower hill tracts of Hindūstān; and there they receive the hire for the conveyance of goods into Khiṭāe; and the hire for what they carry from Hindūstān they receive in Khiṭāe. Thus they pass one winter in Hindūstān and the next one in Khiṭāe alternately. This is the custom followed by the whole of the Canbah. There are some of them who may have conveyed 10,000 sheep loads; and from the rate of twelve *manns* to each sheep, one can compute what is the extent of traffic, and what amount of goods they convey once a year from Hindūstān to Khiṭāe, and *vice versâ*. At all times these loads and burdens accompany them wherever they go, except in case of any affliction or misfortune befalling them; and thus the loads they place on their sheep in Khiṭāe they only remove when they reach Hindūstān, and in the same manner when they return from thence to Tibbat and Khiṭāe again. I have never heard of such customs among any other people, and in many places it would scarcely be believed.

“These Canbah or nomads are a numerous people: for example, one tribe among them, whom they style Dol-bah, will amount to above

<sup>1</sup> Père Regis says: “The chief commodities in which the inhabitants trade with neighbouring countries, are Musk, Rhubarb, Worm-seed, and Furs. The most excellent Rhubarb comes from hence.

50,000 families,<sup>1</sup> and like this tribe there are several others. The writer has made inquiry among the most trustworthy persons among them, respecting the number of these Canbals or nomads, and their answer was, that they were unable to say, for that God alone knew the number of them.

"The dwellers in villages, or sedentary people, who are styled Bol-pā, are distributed among certain territories, such for example as Bālti, which is one of the territories of Tibbat, and that comprehends several other [smaller] territories or districts such as Pūrik and Hābūlah, and Shigā, and Skārdū or Iskārdū, and Ladāqs.<sup>2</sup> Each of these contain forts, stations, and villages (with their lands). Those parts of the region of Tibbat which I have myself seen, the greater number of which were either taken by force of arms, or were acquired possession of after some endeavours by voluntary surrender, are some parts of Bālti, Zan-skār, Mār-yol,<sup>3</sup> Yūdaq, Kōkah, Lō, Pōrās, Rōngah, Mankāb, Zirsū or Zersū, Kāngār, Nisān or Naisān, Yam, Alā Lāe Lōng, Tōk-ō-Lābōk, Asbarak or Asabarak, the whole of which I have traversed. From Asbarak people proceed to Bangālah in twenty-four stages; and Ūrsāng lies east of Asbarak, and Bangālah lies south of it. Ūrsāng is the place to which throughout *Khīṭāe* and Tibbat, they turn to, to pray, and is the most sacred temple of those people. What the writer has heard concerning it, being impossible of verification by him, is consequently not recorded, and possibly most of it is untrue. In short, it is the seat of learning, and city of the monks of *Khīṭāe* and Tibbat.

#### IN EXPLANATION OF THE WONDERS OF, AND DIFFERENT PLACES IN, TIBBAT.

"Of this region of Tibbat which I have myself seen, the manners and customs of its people are after such a fashion, that, notwithstanding I much desire to give a full description of them, I find it impossible to do so. However, I will record some of the astonishing things which I have beheld, or which, time after time, have been verified in my presence, on account of their strangeness. Among these, one is the gold mines. In most places frequented by the Canbals there are gold mines; indeed in most of the Tibbat territory there is gold. Among these are two wonderful mines. One is in what is called Āltūn-cī Tibbat by the

<sup>1</sup> The people called the white and black tent nomads in the Index to the revised sheets of A—K's explorations are, doubtless, the Canbals here noticed.

<sup>2</sup> The Tibbatīs, in their writings, spell this word much the same as Mīrzā Haidar—"Ladīg" and "Ladvāgs" (the last letter in italics not being sounded; and they call the fort thereof "Sles-mkhar."

<sup>3</sup> Mis-called, as usual, in the best maps even, "Marol," and in some others "Malil."

Mughals,<sup>1</sup> in which some of the branches of Dōl-bah Canbahs, or nomads, already noticed, work ; but on account of the excessive coldness of the air they are not able to work more than forty days in each year. The shafts (adits) open on level ground, in such wise that a person can enter them ; and the shafts are numerous, and most of them lead one into the other. It is affirmed that as many as three hundred families at a time continue at all times to dwell in these shafts or holes. The passage of some Mughals happened to lie that way, and being perceived by the Dōl-bah from a distance, when they drew near, these people crept into the shafts so that the Mughals could not find one of them. In these shafts, likewise, they do not burn any oil, only clarified fat of sheep, in which no tallow is contained. They bring the earth in sieves to the mouths of the shafts and wash it, and it is said that from one sieve-full of earth, as much as ten *miṣqāls* (each *miṣqāl* being about one dram and a half) are on an average produced. The same person digs out the earth, brings it out, and washes it himself ; and in the course of a day can fill and wash twenty sieves-full. Although this matter has not been verified and tested by me, nevertheless, the statement agrees in every way with the reports current in Tibbat, and therefore it has been recorded here.

“Another territory is Kōkah, which contains some two hundred forts. Its length is three days’ journey ; and there is gold to be found in every part of it. They dig out a certain quantity of earth and spread it out on the face of a cured hide, and pick out the gold therefrom which is in grains. Some of these grains are of the size of lentils, or peas ; and it is said, that, sometimes, nuggets of the size of an egg and even of the size of a sheep’s liver, or even larger are found.<sup>2</sup> At

<sup>1</sup> Āltūn or Āltān is the Turkī for gold, but not “Altyng ;” and Āltūn-cī Tibbat refers to the northern parts thereof, near the “recently discovered, Altyn mountains.”

<sup>2</sup> All the rivers issuing from these mountains bring down gold — the Indus, the Kunar, the Yār-kand river, as its name indicates, namely, Zar-Afshān — the Scatterer or Diffuser of gold — and several others.

Among the rarities despatched by the Cingiz or Great *Khān* to Sulṭān Muḥammad, the *Khwārazm Shāh*, was a larger nugget than this one by far. The author of the *Ṭabaqāt-i-Nāṣirī* states (page 966) that, “Among the rarities and presents sent to the Sulṭān was a nugget of pure gold, as big as a camel’s neck, which they had brought to him [the Cingiz *Khān*] from the mountain range of *Ṭamghāj*, so that it was necessary to convey that piece of gold upon a cart.”

The ruler of *Ṭamghāj* in the time of the Cingiz *Khān* was styled The Āltān *Khān*, *āltān* or *āltūn* in Turkish signifying gold. *Ṭamghāj* is described as the name of a territory of Turkistān, i.e., the country inhabited by Turks, and the name generally applied to the Bādshāhs or sovereigns of Tibbat and Yughmā ; and *Ṭamghāj* and Yughmā are said to have been “the names of cities giving names to countries also.”

the time that I, the writer of these pages, fixed a capitation tax upon the Kōkah Chiefs, they related, that, only a short time before, a labourer was excavating in a certain part, when the implement he was using became so firmly fixed in a place, that, with all his efforts, he was unable to withdraw it again. He removed the earth from around, and what does he behold but a large stone, and in the middle of it embedded was gold, and the spade firmly fixed therein. Leaving it just as it was, he went away and informed the Hākīm or Governor of the matter, when that functionary, and those then present with him, went in a body to the spot, and took hold of the mass, broke the stone, and one thousand five hundred *misqāls* of pure Tibbati gold were extracted from it, each *misqāl* of that part being a *misqāl* and a half of the usual weight!

"The gold of Kōkah which they extract from the earth is, indeed, so pure, that, however much it may be assayed and tested, the only loss that arises is the right of the fire [*i.e.*, what is lost by heating and melting]; and this fact is considered astonishing and wonderful by travellers and assayers, and probably nowhere else in the world can such a thing be pointed out.

"In most parts of Tibbat the goods and merchandize of Khitā and Hind are to be obtained in much the same proportion and quantity.

"Another of the wonders of Tibbat is what is called *dam-gīrī* [stoppage of the breath or suffocation from stagnation of the air, as it is described], and this malady prevails throughout the whole of Tibbat;<sup>1</sup>

<sup>1</sup> The author of the Survey Record I have before referred to, in his account of the route from Pashat, where gold washing has been carried on for centuries (the "Pishut" of the maps) to Goslak (see my *Notes on Afghānistān*, etc., page 145), over the Calas Ghūshaey, or Pass, says: "The summit of this mountain range, which is named Kund by the Afghāns and Tīraj Mīr by the Tājzīks of Qāshqār [Kāshghar and Qāshqār are totally distinct countries], and which always appears white from excessive snow, lies on the left hand. By the way are dense forests, among the trees of which are many descriptions of fruit-bearing trees, and much grass and herbage of various species; and as from the smell of the grass (or herbage) a person becomes stupified, people take an *onion* along with them in their hands, and immediately on their brain becoming affected they smell the onion and also eat it, and their brain recovers from the effect."

From this it appears that the "*onion* mountains" are more than one range.

In another place the Surveyor says, that the Mīr Shāh Rīzā, Bādshāh or Chief of Drūsh, a dependency of Qāshqār, or Citrāl, who was an enthusiastic geographer, told him likewise, that the range extends in an unbroken, conterminous chain from the tract of country inhabited by the Qirghīz nomads (immediately south and west of Kāshghar), as far as Hirāt, and that Hindū Kush is merely the name of one of the passes leading over it. This range is also called Sarōwar [the same word as occurs in "Lake Mansarowar," of the maps], and the Afghāns style it Kund, both of which words are of the same meaning, Sarōwar and Kund being the Sanskrit for 'lake,' 'pond,' 'pool,' etc.

but where there are forts and villages there it prevails to a less degree. In all cases the symptoms are the same: the respiration is always affected or stopped, and a person's head burns in the same manner as if he had taken a heavy load upon it and had ran up a very high ascent with it; and on account of this burning sensation he cannot speak without much effort. Then sleep overpowers him, but as yet the eyes are scarcely closed in sleep—what from the difficulty of respiration and the burning sensation in the head, and pain in the lungs and chest—than he awakes again in great anguish and agitation; and this is the state into which people always fall when attacked with this malady. When it increases, delirium ensues, and the person begins to talk incoherently, and sometimes has not the power to utter a word. The face, hands, and feet swell; and when this change has come, the person dies between the morning and the early forenoon. It sometimes happens that a person attacked lingers in this state for some days; and if, during this time, death does not supervene, and the invalid reaches a fort or village, or other inhabited place, there is a chance of his life being saved, but if not, death is certain to happen.

“Strange to say, this malady does not attack the people of Tibbat,

In another place (*Notes*, page 309), on crossing the Qarā-Quram range from Kahaplū Aghzā, he says, that “on the way thither, you meet with a vast deal of snow, and much water, grass, and herbage. As the smell emanating from these grasses produces faintness and stupefaction, travellers take care to provide themselves with onions when they travel by this route. When a person becomes affected from the smell, and feels faintness coming over him, his companions give him an onion to eat, and also one to smell at, and this is said to be an effectual antidote.”

It is doubtful, however, whether it would have the same effect if the person *continued* in that part; for, of course, only the first symptoms of *dam-gīrī*, are here referred to.

The Buddhist pilgrims, Hwui Seng and Sung Yun, which latter is said to have been a native of Tibbat, who visited these parts in 518 A.D., in the translation of their travels by Beal from the Chinese (page 183), say: “After entering the *Th'sung Ling* (or Onion Mountains), step by step we crept up for four days, and then reached the highest point of the range. \* \* \* \* To the west of the *Th'sung Ling* mountains all the rivers flow to the westward. \* \* \* \* To the eastward of the capital of this country [Han-pan-to, Pan-to, or Khartehou], there is a rapid river (or a river, Mang-tsin, or a wide ford river) flowing to the north-east towards Sha-leh (Sand-curb, see note 2 page 88).” Here, of course, the Zar-Afshān, described by Mirzā Haidar, is referred to, which is styled by the name of Mangshīn [Mang-tsin] up to the present time.

What I particularly wish to draw attention to here is the coincidence of the range being called the “Onion Mountains” in 518 A.D., from which it is evident that onions have been used for at least some fourteen centuries as an antidote against an attack of *dam-gīrī* (see also page 84), and that the probability is, that the range got the name of *Th'sung Ling*, or Onion Mountains, from this use of onions.

who are unacquainted with it : strangers alone are liable to its attacks ; and their physicians cannot account for this disease attacking strangers and non-dwellers in Tibbat,<sup>1</sup> neither do they or any one else know any remedy for it. The colder the air the more people are affected by it ; and it not only attacks human beings, but every living creature [foreign to Tibbat ?], and more particularly human beings and horses, as will be presently shown. When on one occasion it became necessary to make a rapid inroad of one day's journey, and we set out, on the following morning when I awoke, the horses with the force which accompanied me seemed very few. On making investigation I found that in that one night 2,000 horses had died ; and of my own stud alone there were twenty-four spare horses which had been taken on, and out of them no less than twenty-three had died ! This malady seems to affect horses even more than human beings ; and save in Tibbat, I never heard anything like it happening any where else.

"The '*ulamā*, or ecclesiastics of Tibbat, are all, without exception, called by the general name of *Lāmah*,<sup>2</sup> but they are styled by different titles according to the degree and description of their learning. For example : in my time they styled an *Imām* and a *Mujtahid*, "*Tōngbah*" and "*Kajñwā*," respectively.<sup>3</sup> I used to converse a good deal with them by means of an interpreter ; but, when the discourse became somewhat difficult and abstruse, the interpreter used to be unable to understand it perfectly, and incapable of interpreting it, consequently, the conversation on such occasions would remain incomplete and unfinished. But what I understood of the fundamental articles of their belief is this [the author here gives an account of the Buddhist doctrine which I need not insert here, but merely add what he afterwards mentions regarding the Buddha himself]. "The doctrine of *Shakā Mūnī* is the religious belief of all *Khiṭāc* and Tibbat. In the former country they style him *Shaqiyā Mūnī*, and in the latter, *Shaqā Tōbā* [or

<sup>1</sup> The Tibbatīs we may say, are born to it, and therefore are not affected like strangers by such a rarified atmosphere.

<sup>2</sup> Or *Lānbah*, both being correct.

<sup>3</sup> An *Imām* is prelate or chief priest, a leader in religious matters, and *Mujtahid*, an expounder of the law, traditions, etc., and of the *Qur'ān*. It must not be supposed that the *Mirzā* means that these Tibbatī words are translations of *Imām* and *Mujtahid* : he merely means that the Buddhist priests of high rank or degree are so styled. *Tōngbah* is probably what the Tibbatīs style "*Tsonkhapa*."

According to the author of the *Ṭabaqāt-i-Nāṣirī* (see page 1106) however, "in the time of the Great *Qā'ān*, *Uktāc*, son of the *Cingiz Khān*, *masjids* were founded in all the cities of *Tingit*, *Tamghāj*, and Tibbat, and the countries of *Cīn* ; and all the forts and strongholds of the countries of the east were given in charge to a number of *Musalmān Amīrs*."



Tōyā ?], but, in history, the name is written Shakā Mūni. In some Histories he is accounted among the prophets of Hind, and some aver that he was a philosopher. \* \* \* Shakā Mūni declared that of the 124,000 apostles or prophets who were to follow him, the last would be named Jānksabah, who would be an orphan, without father or mother, and all the world would become converts to his faith; that he himself would impart the precepts of his religion, so that it might be transmitted from one generation to another by these prophets down to the period of Jānksabah's blessed appearance. He also declared that the countenance of this prophet would be in such and such wise; and he had given an image which every one should take care to preserve, because a being would be born of that likeness, and that, before all other people, they should believe on him. At this time, in all their idol-temples, the image or likeness which occupies the chief place, is the image of this expected Jānksabah, and all the likenesses which they make are with reference to him.<sup>1</sup>

"Another of the territories or districts of Tibbat is Zōnkah, which is the most noted and esteemed in all Tibbat. In that part the *māh-farfīn* is produced.

"I saw there a mandate from a Bādshāh of Khiṭāe, written in the Khiṭā-i character, in one corner of which the purport thereof was written in the Tibbatī alphabet, and in another corner, a translation in the Persian language,<sup>2</sup> neatly written in the *naskh* character. It set forth that, 'His Majesty sends his greeting unto all people, and says, that Shakā Mūni, who founded the religion of idol-worship (*but parastī*), lived upwards of 3,000 years ago, and that he had delivered sayings of great wisdom and subtlety which was beyond the capacity of every one to comprehend, and that they might set their minds at rest on that matter.' There are other remarks on the subject of repairing the idol-temples; but the chief object intended to be conveyed is the era of Shakā Mūni. A year different from that of the *Hijrat*, with which I was not acquainted, is written therein; but, from appearances, I should imagine that the document is not much more than a century old, but God knows best. I had gone into Zōnkah in Rabi'ū-l-awwal (third month) of 940 H. (September, 1533 A.D.).<sup>3</sup>

<sup>1</sup> This is a somewhat remarkable statement, and shows that what is assumed to be, and which writers call, "the image of the sitting Buddha," in the temples of Buddhist people, is no other than the likeness of the coming Buddha, Jānksabah, and which Shāqiyā Mūni enjoined his followers to keep in their temples. The same, I think, may be said of the paintings supposed to be of Shāqiyā Mūni.

<sup>2</sup> This shows the extensive use of the Persian language in Asia.

<sup>3</sup> This would be the reign of Yng Tsong, the sixth emperor of the Ming

"In Kāshghar, as well as in Tibbat, the *Qūtās-i-Shahrāe* [or wild *yāk*] is found, which is a formidable animal and a dangerous.<sup>1</sup> When it gets at a person, whether it butts with its horns, and gores him, or whether it kicks out at him, or gets the person under it, it is the cause of that person's destruction; or whether, not having time enough for this, it merely gives him a toss which sends him twenty *gaz* (ells) up into the air, he is hardly likely to live after falling from such a height. One *Qūtās* bull is sufficient load for twelve horses; and one person can in no wise lift its shoulder blade. I killed a *Qūtās* at the time of making a certain raid, and divided the flesh among seventy persons, and each one had sufficient flesh to last him for a period of four days. These animals are not found anywhere else save in the region of Tibbat."

THE AUTHOR IS DESPATCHED ON AN EXPEDITION AGAINST THE INFIDELS  
OF TIBBAT.

After expatiating on the advantages of holy warfare against infidels to the orthodox Musalmān, the author says: "I set out from Kāshghar on this expedition in Zī Hījjah (the last month) of the year 938 H. (the latter half of August, 1531 A.D.). As I have previously mentioned, the northern boundary of Tibbat, that is in other words, Bālti, terminates at Bilaur and Badakhshān. On its winter eastern side is the

dynasty. Du Halde tells us that in the third year of his reign (1441 A.D.) he issued an edict prohibiting all persons from doing honours to *Confucius* in the temples of the idols.

In his sixth year (1444 A.D.) he marched an army against the Tartars [Mughals rather] on the other side of the great wall. He was, however, entirely defeated, and taken prisoner, and carried away into Mughalistan. He is the Tiŋg-thūn of the Lāmah quoted below.

According to the statement of the Lāmah, "Sum-pa Khan-po," whose life is given by Bābū Qarat Candra Dās, in J. A. S. B. for 1889, page 63, the third Ming emperor was called Tai Ming (Yemglo), who ascended the throne in 1402 A.D., but he does not give the year of his death, or that of other emperors: he merely gives the date of their successors' ascending the throne. The fourth Ming emperor, Huŋshi, according to the Lāmah, ascended the throne in 1424 A.D.

This Tai Ming is the same potentate who sent an embassy to Sultān Shāh Rukh Mirzā in 816 H. (1413-14 A.D.), with a letter, who is called Dāe Ming by the historians of Shāh Rukh's reign. The latter sent a return embassy with a long and interesting letter in reply to that of the Ming emperor.

<sup>1</sup> The Amīr, Nāsiru-d-dīn, Sabuk-Tigīn, father of Sultān Maḥmūd of Ghazni, was nick-named by his comrades the *Qarā Buḥkum* or *Black Ghajz-qāo*, which words are respectively Turkish and old Persian for the wild *Yāk* of Tibbat and adjacent parts. Black here refers, not to colour, but ferocity, and such as Mirzā Ḥaidar describes above.

territory of Yār-kand, and to the west of it is Kash-mīr. I was accompanied by Sikandar Sultān [Sultān Saʿīd Khān's son], while the Khān himself proposed to proceed by the route of Khutan into the Altūn-cī Tibbat, which is a *dōl-pah*, or, in other words a *dashṭ* (steppe).<sup>1</sup>

"I set out towards the close of the month before mentioned, and on the 1st of Ṣafar (the second month of the following year, 939 H.), we reached Nūbrah, which is a territory dependent on Tibbat. A messenger was despatched into the whole of these parts to invite the people to embrace the Musalmān faith.<sup>2</sup> Most of them accepted the invitation with submission, with the exception of these black-faced ones of Nūbrah, who manifested a contumacious and rebellious spirit, and all betook themselves to their forts and strongholds. Bōrq-pā, who was the greatest of the chiefs among them, and whose fort was Hōndār, which is the principal stronghold of that part, shut himself up therein. I invested him there; and was occupied for some days in preparing the necessary materials for laying siege to it, such as *manjanīqs* (balistas), *tōrās* (mantelets), etcetera, and on the day fixed upon, moved towards it. Confusion and disorder, however, arose among the enemy, and they evacuated the fort and took to flight, pursued by the Musalmāns as far as it was possible to follow them, and not one of the tribe entertained a hope of escape. Bōrq-pā, with all the males having been killed, a *manār* of the heads of these contumacious rebels was raised, and a monument to the infidels of these parts towered upwards to the sky. Their territory was taken possession of, and troops occupied their forts; and from thence we entered the territory of Mār-yōl. Here there are two Hākims or rulers, one was Lat Jū Ghadān, and the other Mā Shīgūn; and both of them came and presented themselves, and submitted. At this time the sun changed from *Virgo* and entered the sign *Libra*; and in *Libra* throughout all Tibbat, the severity of the cold is so great as not to be equalled in any other part in this season of the year. Consultation was now held with the Amīrs along with me, as to what part of Tibbat was the best for us to make our *qishlāq*, or winter quarters,<sup>3</sup> and where forage for the cattle and food for the men would

<sup>1</sup> From the context this refers to the table land of Tibbat, rather than to a *dashṭ* or steppe.

<sup>2</sup> In other words, they were called upon to "*come in*,"—something after the manner recently, and now being practised on the frontier of Afghānistān towards the purely Afghān tribes—and allow themselves to be "annexed" against their will, but their religion is not interfered with.

<sup>3</sup> Any one who has been in the Afghān state, especially its northern part, ought to know the proper meaning of *qishlāq* or *qishlāgh* ('q' and 'gh' being permutable in the Turkī language), and most people who have been in those parts do know that it simply means a *place* or *tract* in which the nomad people take up their

be procurable. No one could give indication of any such place in Tibbat; and the general opinion was, that it was advisable to enter Kash-mir, and take up our winter quarters there.<sup>1</sup> If we could subjugate it, well, otherwise, having passed the winter there, we could leave it when the spring came round. Having reinforced the troops left to hold the different places in Tibbat [this part of it], we left Mār-yöl and those tracts, and set out towards Kash-mir. News now reached me that the Khān himself [Sultān Sa'id Khān, ruler of Kāshghar] had arrived in these parts (Tibbat), and that on the road he had been attacked with *dam-gīri*, the malady peculiar to this infidel land; and that the Khān wished to see me as quickly as possible. I therefore left the forces along with me at the very place where the news reached me, and set out at once for the Khān's presence.

"I previously mentioned that the Khān had intended to advance into Tibbat towards the *dol-pak* or *dash*t by way of Khutan, having despatched me with a part of his forces towards Bālti. At the period in question the sun was in *Aries*. The Khān, however, passed a month in some of the summer stations, and also in the pasture lands of the mountains of Kāshghar, until, in the meanwhile, the season of *Sunbal* had come round [the sun had entered the constellation *Virgo*]. People in the habit of passing to and fro in these parts represented to the Khān, that the time had gone by, and that after this, all the waters of the rivers would be entirely frozen up, in such wise that no water would be procurable, and that a sufficient quantity of firewood was not to be obtained in that part enough to thaw a sufficient quantity to supply the wants of man and beast.<sup>2</sup> Further, that it was necessary to make the utmost endeavours to procure and lay in a sufficiency of the droppings of the wild *qūqās* or *yāk*, to be able, at least, to cook broth. On this account, to secure a supply, a number of the men of the force [with the Khān] remained behind on this route, on foot, for this purpose. The Khān did not wish to retire and thus spoil this holy warfare, and said that difficulties and hardships were to be expected,

winter quarters. But Lieut.-Col. T. H. Holdich, R. E., who was with the Afghān Boundary Commission, has made a discovery to the contrary; for in his "Report" of the 14th of March, 1887, to the Secretary of State for India, page 25, he assures us that "*kishlaks*" are "mud villages," from "time immemorial" perhaps. After this, what might *ilāq*, or *ilāgh* be, which signify in the same language, a place where nomads take up their summer quarters?

<sup>1</sup> We have been repeatedly informed by persons who wish to be considered authorities in these matters, that we need not have any fear, because there are no practicable routes leading into Kash-mir through Tibbat, and that that country was never yet invaded from the north. Here is a proof of their incorrectness.

<sup>2</sup> Showing that such was the usual method of obtaining water at that season.

but the merit would be all the greater; and that it was necessary to follow Mirzā Haidar, referring to myself, and complete the work they had undertaken. The Khān therefore returned from Khutan, and followed the very same route into Bālti which I had myself taken. On the road his health gave way from an attack of *dam-gīrī*. He was very ill, and would often lapse into insensibility. His physicians tried all their remedies without avail; and although advised to give up proceeding farther by his Amīrs, he would not consent. He was desirous of joining me, although he himself expected he should die on the way. He told them, saying: 'Take me onwards to the scene of operations while life remains; and when I am incapable of anything, then you may do as you consider best.' He repeatedly inquired about me, and prayed that he might last out until he had seen me. It was impossible for them to halt anywhere, notwithstanding the state the Khān was in, because of the excessive cold, and the absence of water and forage, besides which, the very act of delaying in any one place would be the cause of increase of the malady; and the only chance remaining was for him to be taken to a place where the effects of this *dam-gīrī* were by no means so great. The Amīrs accordingly had taken the Khān to such a place; and on that day I arrived in his camp. The Khān had come to himself again on that day, and was much pleased at seeing me, and thanked God that I had come; and he actually recovered a little, so that we were able to conduct him into Nūbrah. There a consultation was held, and each one gave his opinion; and I represented to the Khān that, with all my search and inquiries, I found there was no place in these parts of Tibbat where more than 1,000 men could find winter quarters, and such a small number were incapable of suppressing any outbreak or quelling any hostility if it arose, and that, with the exception of Kash-mīr, no one could point out any other befitting place in which to remain for the winter. On the way, however, were several passes, in consequence of which, the weak state of the Khān's condition would not possibly admit of his proceeding thither; that if the Khān consented to the arrangement, 1,000 men should be left in attendance on him, and he should return to Bālti, where there was neither *dam-gīrī* to fear, nor passes to be crossed; while I, with the rest of the force, would proceed into Kash-mīr and there remain for the winter, and when spring should come round we could act as might be deemed advisable. The Khān approved of this; and as it was understood at the outset, that Tibbat was not a country into which a large force could be taken<sup>1</sup>

<sup>1</sup> When Ūktāc Qā'ān undertook the final conquest of Khijāe, in Rabī'ū-l-awwal, 627 H. (March, 1230 A.D.), he despatched a force of 20,000 men under his brother, Tūlī Khān, along with whom was the Juzbī, Tūqūlqū, to enter that territory by the

[supported], the number originally fixed was only 5,000 in all : 3,000 with the Khān, and 2,000 under my orders. Accordingly, the Khān now took 1,000 men along with him, and marched towards Bāltī; while the remaining 4,000, with several Amīrs of the Khān, proceeded with me towards Kash-mīr.

"The Khān reached Bāltī at the end of *Libra*; and of the chiefs of that part, Bahrām, the Jū [or Jū-i], presented himself, and submitted to him, but the rest of the Jū-iān [plural of Jū or Jū-i] of Bāltī, as is usual among such infidels, showed hostility and contumacy. With Bahrām, Jū, leading the way, the force with the Khān attacked Shigar, which is the seat of Government and chief place in all Bāltī, and which was taken on the first attack. The men were put to the sword, while the women and children, and plunder, were appropriated by the Khān's soldiers. After that they did not refrain from attacking other approachable places in that mountain tract, but, where there were strong forts and difficult *darahs*, those they were unable to approach, and they were left alone in consequence.

"On account of the depth of the snow that winter, no news could be sent from Kash-mīr to the Khān, and therefore the contumacious infidels gave out such reports as suited them and their infernal purposes, [Then, as now, all who defend their homes and their liberty, in these parts, and refuse "to come in," are all "rebels and freebooters," and their designs "infernal"], so that the troops in Bāltī had become anxious and depressed; until, at the close of winter, the swift messengers whom I sent from Kash-mīr to the Khān, to announce the conquest of that territory, turned their sorrow into joy. In the beginning of spring, the Khān, with his force, retired from Bāltī; and the expedition into Nūbrah, which I had made preparations for undertaking in person, had been entrusted by the Khān to the great Amīr, the Kōkal-dāsh, whose name has been mentioned before in the affairs of Kāshghar. Through defective counsel, however, and want of unanimity and foresight among his forces, they had devastated all that tract in such a manner, that the whole of the people thereof had been roused to resistance. All that could do so had fled to the strong places, and only their families and feeble people, who could not be removed, were left behind. Abandoning them, they did not cease from plundering on the routes, and from sedition, and other improper acts. As it was not

southern route through Tibbat, and near the northern frontier of the empire of Mahā Cīn. \* \* \* \* Tūlī's force was nearly perishing of famine, so that his men were actually reduced to the necessity of eating human flesh and dry grass, and his further progress was stopped until aid was sent him. See *Tūbaqāt-i-Nāsiri*, note, page 928.

advisable for them [the force under the Kōkal-dāsh] to continue in Nūbrah any longer, they had come to Mār-yōl. Tā Shīgūn [the chief of that part] not having presented himself, one fort belonging to him was captured, and he and its defenders killed; and they were occupying the place when I arrived from Kash-mīr to present myself to the Khān, as I shall now proceed to relate.

“Having set out from Nūbrah, with the additional troops sent along with me by the Khān, as before mentioned, and rejoined my own force which I had left in the neighbourhood of Mār-yōl, I advanced with all possible celerity towards Kash-mīr. On the way, all the chiefs of Tibbat, through whose districts we passed, submitted, and added their fighting men to the number of mine. Some of Bālti Tibbat lying in our way we made incursions into; and in the middle of *Scorpio*, in Jamādiu-ṣ-ṣānī, 939 H.<sup>1</sup> (February, 1533 A.D.), entered Kash-mīr by the Zōji Lah or Pass [by the Dirās road. I need not give here what he says about Kash-mīr and the operations therein: they are matters of history which I hope to discuss hereafter]. At the end of Shawwāl (about the end of June, 1533 A.D.) we again set out from Kash-mīr on our return, by the same route as we had entered it, by Lār. On reaching the frontiers of Tibbat, most of the people of that part came and presented *pēsh-kash* [tribute], and their wealth, with the exception of those of Karsah [the “Kartse” of the maps], which is a territory or district dependent on Tibbat, consisting of a *darah* or valley narrower than the heart of a miser, and the sides were steep in proportion, so that, at midday even, the route through it was dark. The people thereof were very bold and audacious, as they conceived it would be impossible to get at them. We reached the entrance to it after the time of midday prayer; and during the night every one made his preparations, and waited for the next day to dawn. We attacked them, and they several times rolled down great stones upon the troops of Islām, who, however, scaled the towering heights, and at last gained the victory. As it was all mountain, the enemy could not easily escape, and consequently most of them were killed, and their families and their effects became the booty of the victors. This success produced a wonderful effect on other parts, the people of which could not offer us too much; and all the wealth of the Pūrik district, or territory, dependent on Tibbat, was gathered in, and this I divided among the Amīrs and soldiery, after having selected a few of the best things for presentation to the Khān.”

<sup>1</sup> This would be in February, 1533 A.D., but the sun enters *Scorpio* in October; and the year 939 H. commenced on the 2nd of August, 1532 A.D. I think, therefore, the Mīrzā must mean Rabī‘u-l-awwal or Rabī‘u-ṣ-ṣānī, the third or fourth month, not the sixth month of the year as above.

THE KHĀN SETS OUT FOR YĀR-KAND, HAVING NOMINATED THE AUTHOR TO PROCEED TOWARDS ŪRSĀNG, AND THE KHĀN'S DEATH.

"After my return from Kash-mir to the Khān's presence at Mār-yōl, he held counsel with all his Amirs; and finding that he was unable to undertake the chief object of this expedition himself, that is to say, the destruction of the great idol-temple of Ūrsāng,<sup>1</sup> the place to which all the people of Khītāe turn towards in prayer [most sacred place], and which he considered it was his duty as a pious Musalmān to do, he determined to send me on that service. I was to take whomsoever I chose with me, and was to have entire control over every one. I determined to take my brother, 'Abdu-l-lāh Mirzā, and my paternal uncle's son, Maḥmūd Mirzā, and Jānkah Mirzā, who is mentioned in the account of Kāshghar; and of the common men I selected 2,000, and prepared for the expedition. Six days of Zī-Hijjah [the last month] were occupied in this, when the time came for bidding adieu to the Khān, who was going from Mār-yōl to Yār-kand. I accompanied him one stage on the way, when the time for separation came. He kept his looks fixed upon me as long as he could see me, as I did towards him as long as he was in sight, and then I turned away with tearful eyes, and heart burning with the fire of separation from one I was never again to behold. I heard from him four days after, that he, having passed beyond the Sāqirī 'Uqbah or Pass,<sup>2</sup> intending to push on after the usual religious observances of the 'Id-i-Aẓḥā [10th of the month above named]; and this was his last epistle to me. After having observed the ceremonies of that festival he had set out, being taken on with all possible celerity; and he had cleared the Mūz Ārt<sup>3</sup> [Ice Defile Pass] when his condition changed for the worst, through the noxious air of that tract. From thence to the place where the malady of *dam-gīrī* ceases to affect one was eight days' journey [ordinary stages], and he wished to be taken on as quickly as possible. As the only hope of saving his life was to get him beyond its influence, they seated him on horseback, supporting him on either side, when an upright position is the worst possible one for a person suffering from this malady, and he ought to have been placed in a litter. They completed the eight stages in four days; and at the time of afternoon prayer, had reached a place within three *farsakhs* or leagues of where all danger from *dam-gīrī* ceases, when the good Khān breathed his last." [Here Mirzā Ḥaidar pays a grateful tribute to his memory, and mourns

<sup>1</sup> He writes this name Ūrsang as well as Ūrsāng.

<sup>2</sup> See my *Notes*, page 314.

<sup>3</sup> This word is not 'muz,' but *mūz*, the *u* being long.



the loss of him who had cherished him from his boyhood, whose brother-in-law he was, in whose service he had passed twenty-eight years, and from whom, up to the very last, he had received constant proofs of affection and confidence. His death took place on the 16th of Zī-Ḥijjah, 939 H. (7th July, 1533, old style), aged 47. He was descended from Caghātāe Khān, son of the Cingiz, or Great, Khān, and had reigned over Kāshghar and Yār-kand for twenty years independently. Bābar Bādshāh was his paternal uncle's son.]

"I passed the 'Id-i-Azhā at Mār-yōl, and then set out on my expedition against Ūrsāng. We proceeded twenty days' journey, meeting with none of the infidels of Tibbat; for such as there were had dispersed and entered into their forts, which were of considerable strength, and in which they placed great confidence, and to capture which would have been a difficult matter, and the advantage to be gained thereby not equal to the trouble. So, leaving Iskandar Sultān, and my brother, 'Abdu-l-lāh Mirzā, and my cousin, Maḥmūd Mirzā to follow, with the heavy baggage and materials, and the weak mules, we set out with the light-armed troops and the strongest horses, with all possible celerity. On the 1st of Šafar (second month), 940 H. (21st of August, 1533 A.D.) we reached a place called Bār-yāng, belonging to a numerous nomad people (*lit.* dwellers in tents) of Tibbat, whom we came upon and harried, so that we captured near upon 300,000 sheep, together with captives, horses, and other property, all of which became the booty of the soldiery. There we halted for some time to allow the cattle to graze in the pasture lands thereof, and to allow Iskandar Sultān, 'Abdu-l-lāh Mirzā, and Maḥmūd Mirzā, to come up. As I had gone on in advance, they were following at leisure; and on the 1st of Muḥarram (first month) of the year 940 H. (22nd July, 1533 A.D.), they had moved against one of those forts which I previously referred to, named Kārdūn,<sup>1</sup> and having reduced its defenders to extremity, they applied for aid to one of the Rāes of Hindūstān, and had brought thither 3,000 Hindūs, dagger-men [*kaṭārah-dār*], infantry. Iskandar Sultān, and my brothers, with 200 of their men, moved to attack them, and with such haste, that only a few of that number kept up with them. My brother, 'Abdu-l-lāh Mirzā, was an intrepid youth, and previous to this had performed brave deeds in the force along with the late Khān in Bālti. Flushed therefrom, he did not wait for the troops

<sup>1</sup> Possibly "Kārdam" of Walker's map in longitude 81° 8', latitude 30° 27', and about eighteen miles south-west of his "Rakas Kal Lake," near the frontiers of Hindūstān and Nēpāl, but I think it is much farther south than the route taken by Mirzā Ḥaidar. There is a place called Barkhal on some maps in about longitude 84° 50', and latitude 35° 30', but that again is too far north.

to come up, but foolishly threw himself upon the enemy, with only three men with him. The enemy surrounded them; and at this juncture, Maḥmūd Mirzā, with four others came to his assistance, charged among the enemy, and rescued 'Abdu-l-lāh Mirzā. Not content with this, 'Abdu-l-lāh [and the others] again faced about and charged their opponents; and he was again completely surrounded, when five heroes came up, and seeing them in this plight, they also charged the infidels; but before they could reach them, they had cut my brother, 'Abdu-l-lāh, into pieces, in such wise that every bit of his body, armour, and clothes remained in the possession of those infidels.

"Having continued in the pasture grounds here [at Bār-yāng] until the cattle were refreshed and recruited, I sent back from this place all the booty that had been taken; and having carefully selected 900 men from my force, with these I set out for Ūrsāng. From Mār-yōl of Tibbat to this place is a distance of two months' journey, and when within one month's distance from it, we reached a point where there is a great *kōl* or lake,<sup>1</sup> the circumference of which is forty *farsangs* [leagues], and on the banks thereof there is a fort which they call Tōk [Thōk] of Labōk, or Labūk, and there we happened to pass the night. Alas, when we awoke the next morning, the whole of the horses were dead, with the exception of a very few which were half-dead and paralyzed or distorted! I had twenty-seven horses of my own along with me, and by morning, but one remained unaffected, two others were half-dead, and twenty-four were quite dead; and this was the effect of *dam-girī*, as before explained.

"When we started from that place that morning one-fifth of the troops only were mounted, and the rest had to march on foot. On the second day, a district or territory named Yam<sup>2</sup> was harried, and many captives were taken. The people thereof stated that from thence to Bangākūh was a road of twenty-four days' journey.<sup>3</sup> At this time, of

<sup>1</sup> This lake seems to be the "Chargut Cho, or Lake" of the maps, the largest of several west and north-west of the Tingrī Nāwar, and from which Lhāsa is distant about two hundred and fifty miles towards the south-east. At the rate of about twenty-five miles a day, which would be the average for horsemen in this part, it would be just ten stages from Lhāsa, and about three hundred and sixty miles northwards of Dārjiling. We must, however, allow for the physical changes of nearly four centuries.

<sup>2</sup> This evidently is the name which occurs in that of the *Chō* or lake to the south-west of the "Chargut Cho."

<sup>3</sup> It was by this route probably that Malik Ikhtiyārū-d-dīn, Muḥammad, the Khālī Turk, son of Bakht-yārū-d-dīn, and conqueror of Bang-āl (Bengal) invaded Tibbat from his capital, Lakhnāwaṭī, at the close of the year 610 H. (1205 A.D.), as related in the *Tibbat-i-Nāṣirī*, pages 560-563. After he had passed "the

the force along with me, the number of mounted men whose horses were strong enough to go on, amounted to ninety only; and with these I proceeded four days' journey onwards to Asbaraq, from which to Ūrsāng<sup>1</sup>

great river, Bēg-matī [the Brahmā-putr?], which in volume, breadth and depth, was three times greater than the Gang, he pushed on for fifteen days, and, on the sixteenth, reached the open country of Tibbat."

The Cingiz Khān while wintering at and around Gībarī in the district to the north of Peshāwar, before hearing that all Tingqūt and Tamghāj was in a state of revolt, was desirous of entering India, and returning into Cin by way of Lakhana-waṭī and Kāmṛūd; but, on hearing of these formidable insurrections, he resolved to return by the way he came, by Buqlān, Bukhārā, and Samar-qand, where he passed the winter of 620-621 H. (1223-24 A.D.), and subsequently set out for the disturbed territories "by way of Lōb and the country of Tibbat," that is, along the skirt of the Āltān Tāgh referred to in p. 89 note <sup>3</sup>.

<sup>1</sup> It will be noticed that the Mīrzā never mentions the name of any place called Lhāsa, and yet, without doubt, he refers to the great temple or series of temples at the place known to us by that name. But from the context here, and what the old Jesuit travellers have stated, Lhāsa was the name of the territory, and not of the temple, or place of residence of the Grand Lāmah. In the map to Prejevalsky's travels, in the "*Proceedings of the Royal Geographical Society*," for May, 1887, "*Utsang*" appears as the name of the territory or province in which what we call Lhāsa is situated. This may be a vitiated form of Ūrsāng, the name of the great temple according to the Mīrzā.

According to the Jesuit Grueber, however, Lhāsa was the name of the territory or province, and not the name of the capital and the residence of the Grand Lāmah, where the great temple is, which he says is called "*Butala*," and which "adjoined the city of Tonkir." From this it would seem that the names have been changed in comparatively modern times since the Mīrzā wrote; but "*Butala*" cannot be Ūrsāng, as the former temple was only built in 1644 A.D.

It is not impossible that the name Lhāsa may have been applied to the capital and great temple in the same manner that Sri-Nagar is called "the city of Kash-mīr:" not meaning that the city ever was or is called Kash-mīr, but, that it was and is "the chief city of or belonging to the territory of Kash-mīr." In the same way, probably, Tōnkir was styled "The chief place or city of or belonging to Lhāsa," and from constant use that name has been applied exclusively to the city where the great temple is, and where the Grand Lāmah resides.

Grueber calls the whole country *Tangut* [Tingqūt of the Mughals and Turks], and says it is divided into several parts, of which Lhāsa, or Barantolo is the chief.

In the account of Anandah, son of Mangqlin, son of Qubilāe Qā'an, in Tingqūt, the Tārīkh-i-Alfi states, that Tīmūr Qā'an, another grandson of Qubilāe, who succeeded him, confirmed Anandah, his cousin, in the government of that territory; and it is stated in that work, that "Tingqūt is an extensive territory on the west side of *Khitāe*, and Tingqūt, in the language of *Khitāe*, is called *Ilawāshī*, that is, the *rūd khānah*, or river, on the west, because most of the cities of Tingqūt are situated on the banks of that river [the Hoang-Ho?]. The great cities of that territory, which used to be the capitals and seat of government of that part from time to time, are five [the names of which are given, but only two can be written with any certainty, the others having no vowel points; namely, Qanjānqū, which

only eight days' journey remained. As, however, the horses of the men still remaining with me were falling, it became absolutely necessary to return. There was no help for it: and after setting out on our return, in six days we rejoined those we had left at Yam,<sup>1</sup> and from thence continued our retreat. This took place on the 8th of Rabi'ū-l-ākhir (fourth month: November); and at the end of Jamādiū-l-ākhir, we reached Tām-Lik, distant from Mār-yōl twenty days' journey, and again joined the men with the booty and plunder which had been previously sent back. At Tām-Lik, which is one of the great territories of Tibbat, the people of Kōkah, having come, said that they agreed to pay the *jaziah* [a capitation tax on infidels, or non-Musalmāns], and invited me to come thither and fix the same, such as their means would admit of. In consequence of this request, I proceeded towards Kōkah, and between it and Tām-Lik passed one night on the road [took him two days to go], and reached it. The people received me in the most hospitable manner; and I remained there three days, and fixed the *jaziah* on that

might possibly be meant for Kong-tsang-fū of the Chinese, and Ū-bāliḳ. The others are written in the original, *فحسق*, *ازرى* or *اردوى*, and *حلجان*. There are twenty-four lesser cities, besides towns and villages without number, and most of the inhabitants are Musalmāns.

The authors of the *Tārikh-i-Alfi*, in another place, quoting from some older works, state, that "Tingqūt is described as a mountainous country (also) called Ankasīe. The Mughals called the country, which contained cities, fortresses, and many buildings, Aqashūn or Qāshūn," the chief city, apparently, giving name to the country also. See also note <sup>1</sup>, page 88.

Tingqūt seems to be the Hya or Ning-hya of the Chinese, the capital of which is called Iriqī or Irqī in the Tingqūt language, and Iriqiā or Irqiā by the Mughals. There is still a "Ning-hya-wei" close to the Great Wall.

Sum-pa Khan-po, the Lāmah, quoted elsewhere, states, that in 1205 A.D. "Chīngis [the Gīngiz, or Great, Khān] entered Tibbat, and subjugated all its provinces with the exception of Mi-Nag." This invasion of Tingqūt, as the Mughals style it, took place in 603 H. (1206-7 A.D.). The Lāmah afterwards states that "Chīngis subjugated Mi-nag of Tibbat in 1225 A.D., after which he died." This agrees with the Mughal accounts, which state, that, in 622 H. (1224-25 A.D.), the Gīngiz Khān entered Tingqūt or Qāshūn, Shīdarqū, the Tingrī Khān, the ruler, having assembled a vast army, intending to throw off the Mughal yoke. The cities of Qām-jīw, Kā-jū, Su-jū, Arūmī or Urūmī, were taken, and the city of Ningāi, evidently the Ning-hya of the Chinese, was invested. See *Ṭabaqāt-i-Nāṣiri*, page 1085.

It must not be forgotten that Tibbat and parts adjacent have been subject to some great earthquakes, which probably changed the face of the country in many parts, and the courses of rivers. There was a great earthquake in 1352 A.D., and another, a fearful one, in 1681 A.D.

<sup>1</sup> This name is written Nīm here—*نیم*. Before it was Yam—*یم*—and I believe the additional point, making it Nīm, is an error of the copyist.

place [*sic*] at 3,000 Tibbatī *miṣqāls* [of gold], which are one *miṣqāl* and a half of our weight, and returned again [to Tām-Līk].

“Having completed this arrangement, I set out on my return; and on the road disastrous news reached me of the breaking up and dispersion of the force originally sent with me, as will be presently explained. [Here reference is made to the acts of ‘Abdu-r-rashīd Sulṭān, the son and successor of the late Sulṭān, Sa‘īd Khān, over Kāshghar]. Rashīd Sulṭān, when he set to work to murder his kindred, and afflict and plunder them, despatched an agent into Tibbat, and entrusted him with several mandates bearing his seal. One was for his brother, Iskandar Sulṭān, who was along with me, saying: “I give up to thee the territory of Tibbat; and let Mirzā Ḥaidar and Maḥmūd Mirzā remain there.” To the rest of those composing the force, to every troop and standard, one of these missives was sent, to this effect: “Every man who after this continues to remain in Tibbat, and does not immediately on the receipt of this order, forthwith disband and set out towards Yār-kand, his wife, family, and effects will be sold in Qirghīz<sup>1</sup> in exchange for horses.” As this order had been received when I was away at Kōkah, as already mentioned, and had become known throughout the force, and its meaning fully understood, the men composing it, considering my absence very fortunate, deserted, and set out with all haste towards Yār-kand. Only Iskandar Sulṭān and my cousin, Maḥmūd Mirzā, with a few followers, remained. Two days after this catastrophe I arrived at the stage or halting place [Tām-Līk] from whence the troops had dispersed and gone off. Iskandar Sulṭān and my cousin, Maḥmūd, related what had happened, and advised that we should not move that day, but remain there over night, as some of those who had gone off had done so because they were help-

<sup>1</sup> In another part of his work the author mentions who the Qirghīz are, and which information people in the present day, for the most part, are ignorant of. He says: “The Qirghīz are a tribe of Mughals, a division of the Üir-āts, of which latter race near upon 30,000 remained [in his day] within the limits of Turfān and Kāshghar. These Qirghīz having manifested much hostility towards the princes of the other Mughals, they separated from them; and the latter people, having become Munsalmāns, while the Qirghīz continued infidels, the other Mughals, in consequence, expelled them altogether.” I have mentioned these facts, because we may be told hereafter that the Qirghīz are a totally different race.

Mirzā Muḥammad Ḥaidar calls the tract which these Qirghīz inhabited in his day, Qirghīz likewise, that is, *the country of the Qirghīz*.

Ibn Ḥauqal mentions the country of Khirkhīz or Ghirghīz, and says: “The country of Tibbat is situated between Khirkhīz and the empire of Cīn. Cīn lies between the sea and the land of the Ghuzz (Turks) and Tibbat; but the other parts [some?] of Tibbat were annexed to it.” See page 85.

less, and knew not what else to do, and that it was probable some of the staunch ones would rejoin us. I had along with me in this expedition some hundred veterans, champions, and leaders, who had served with me for years, and their fathers and grandfathers had also served, who had been with me in many conflicts, and whom I looked upon and trusted as equals and brothers, rather than as subordinates. They had been selected by me on many occasions for honourable posts, and on the part of whom hostility I considered wholly impossible; yet, even these deserted me in the night and fled. In the morning I found all had deserted me, but Jān Aḥmad, Atkah,<sup>1</sup> whom I regarded as my foster father, and one of my Qōkal-tāshis,<sup>2</sup> named Shāh Muḥammad, whom I implicitly trusted, but he came back again, bringing five menial servants with him. I was thus relieved of the fear of being left entirely alone; and altogether, that day, about fifty men assembled around me. From this halting place we now set out towards Mār-yōl. It was the beginning of the winter season, and the sun had entered *Capricorn*, and the cold was so intense as cannot be described. Out of this number with me, some forty either lost a hand, foot, ear, eye, or nose, from the frost; and with the endurance of these afflictions and tortures we succeeded in twenty-five days in reaching Mār-yōl again.

The Jū-iān of Mār-yōl, Tā Shīgūn, [and] Raltah Jighdān, who have been mentioned previously,<sup>3</sup> hastened to present themselves and tender their services, notwithstanding, that previously, they had been treated with severity, plundered, and their people killed. I was rather suspicious at this, but, contrary to my expectations, they proceeded to perform various sorts of good service for us; and, to assure us, stated, that it was four hundred years that from father to son they had been subjects of our Bādshāhs, "we their subjects and servants, and they our protectors and nourishers;" that, "if at the time when [those Bādshāhs came] in pomp and grandeur, with a great number of followers, and they themselves through fear and apprehension had committed any transgression or misconduct, it had been visited with corresponding punishment, according to usage in such cases. If every one among the Jū-iān of Tibbat had at that time submitted and presented themselves, they had done so out of fear and terror, but that now they offered their services in all sincerity and truth, and from their hearts, not from the tip of the tongue." The fort of Shīah or Shiyah, which is the

<sup>1</sup> Atkah really means a tutor or instructor,—a superior servant entrusted with the education of his master's son.

<sup>2</sup> This word Qōkal-tāsh or Qōkal-dāsh, for it is written both ways, appears equivalent to a subaltern, henchman, or armour-bearer.

<sup>3</sup> Only one of these, Tā Shīgūn. See page 99.

chief place and seat of Government of the Mār-yōl territory, they gave up to us as an offering; and we entered it, and took up our quarters therein. In short, we there enjoyed comparative luxury and comfort after all our hardships and difficulties. While there also, several of the men of the army, who had remained behind in that part, rejoined us; and among them was the Maulānā, Darwēsh Muḥammad, of Qarā-Tāgh, one of the followers of the Makhdūm, the Khwājah, Muḥammad Yūsuf. The Maulānā was a good man, and was exceedingly well acquainted with the Tibbati language; and he was on terms of friendship and intimacy with all the Jū-īān of Tibbat. One, a Ḥājī, from Kash-mīr, also joined me; and he will be often mentioned in this work. In this manner over sixty persons were now collected about me, but all the soldiery had deserted and gone off [with the few exceptions referred to]. The latter, from the severity of the climate, and the difficulty and affliction that befel them on the way towards Yār-kand, found it was almost impossible to proceed. Those who persevered in so doing lost all their property, and 150 men among the number died from the excessive cold, and the remainder, half dead, succeeded in reaching Yār-kand. Another body turned back, and reached Mār-yōl in a sorry plight. Again a body of about 500 men were got together, and we succeeded in collecting about 10,000 sheep, so that we were able to live in comfort again.

“When I returned from the Ūrsāng expedition, and before reaching Mār-yōl, I had, it will be remembered, despatched Jān Aḥmad, the Atkah, and Shāh Muḥammad, the Qōkal-tāsh, with presents and rarities, taken during the expedition, to Rashīd Sulṭān, to Yār-kand, and to remind him of certain previous agreements between us. \* \* \* \* When that winter had come to a close, Rashīd Sulṭān despatched Bēdkan, son of Jān Aḥmad, the Atkah, who is my Qōkal-tāsh, and associated along with him, Ḥasan, Diwānah, to make his apologies and express regret at what had happened out of inadvertency, and of which he was much ashamed; and therefore it was necessary to express his regret to that friend, meaning myself, at what had happened. Further, that the Maulānā, Qōdāsh, with 200 men, had been despatched to join me, and that my own servants who had reached his presence [with the presents], should return again without let or hindrance. He also sent me some horses and a few rarities. The receipt of this communication was satisfactory; and now great part of Tibbat acknowledged submission to us.

“Maulānā Qōdāsh arrived in due course, and along with him several trustworthy dependents of mine; and after the arrival of this party we moved towards the boundary of Tibbat which adjoins Kash-

mīr, and all Bāltī paid its assessed revenue in a satisfactory manner. Sōrū, which is one of the places belonging to Bāltī, is the strongest and most defensible in that country.<sup>1</sup> Maulānā Qōdāsh asked permission to go there and collect the revenue assessed upon it. I was not willing, as I know those infidels do not like that any one should see their *darahs* and strong places; and they had intimated that they would themselves come, and bring the revenue to me along with them, at the place where I then was, and therefore there was no necessity for sending any one to collect it. Fate, however, had decreed otherwise, and the Maulānā went; and the Sōrū people waylaid him in a narrow defile, and without giving him any chance of resistance, slew him and twenty-four other trustworthy persons besides. Although my force numbered near upon 700 men, yet, from want of discipline and training, and deficiency of weapons, to avenge them was impossible; and much chagrined at not being able to do so, we moved from Bāltī to Tibbat-i-Zang-As-skār<sup>2</sup> [Zang-Skār], which is the name of one of the territories of Tibbat. It had not as yet been entered on account of its altitude,<sup>3</sup> and the difficulty of approaching it; and the time for collecting the assessed revenue was not yet arrived, when we appeared on the scene, to wait for the time, and in combination collect it. At this time a messenger came from one of the Jū-i<sup>4</sup> of Bāltī, Tungī Sukāb, by name, who had done good service for me on a former occasion, saying, that now the opportunity had come for making a raid upon the murderers of Maulānā Qōdāsh, and slaying the males in retribution for their murdering him and his party, and making their families captive.

"I had sent back some of the men composing my small force, whose strength had failed them, to Mār-yōl, so that I might be able to move quickly with the strong and robust. As an escort to these weak men, I had sent my cousin, Maḥmūd Mirzā, and a small party, to conduct them one stage on the way back, as the route was dangerous, and, having conducted them through the dangerous part, to halt at that stage for the night. I told him to keep the horses of his party near him during the night on account of the danger of the locality; and a horse, while grazing near the place of his repose, came rather too close to his head. He struck the horse to make the animal move a little farther off, when it launched out at him, and gave him such a kick in the

<sup>1</sup> The altitude of Sōrū, in the *darah* of that name, is just 10,624 feet above the sea level, and has lofty mountains on all sides of it.

<sup>2</sup> Also written Zang-kār, and Zās-kār by more recent authors. See my *Notes* page 313.

<sup>3</sup> Zang-As-skār stands much higher than Sōrū.

<sup>4</sup> Jū or Jū-i, plural Jū-iān, is the Tibbatī for a petty chief. Note to page 103.



forehead that it was beaten in to the extent of the size of the horse's hoof. The next day he came to me, and I examined the wound; and, according to the custom of the Mughal surgeons, I extracted the pieces of bone from the wound, and set to to cure him if I could. I sent word of this untoward accident to Tungī Sukāb, who sent a message in reply saying, that as it appeared there was now a difficulty in my coming, if I would despatch a few men, he having captured Sōrū, would send me a fifth of whatever booty might be taken. This message reached me at Khūrbā,<sup>1</sup> in the centre of Zang-As-skār, where I was then halted; and Sōt, where Tungī Sukāb dwelt, was five days' journey off. I accordingly despatched the Maulānā, Darwēsh Muḥammad, of Qarā Tāgh, who was on very friendly terms with the Jū-iāns of Tibbat, along with Nūr 'Alī, Dīwānah, who was one of the most trustworthy of my adherents, and who, when the troops deserted and went off towards Yār-kand, on the occasion previously referred to had returned to me again. These two I made leaders, and sent 70 men along with them; and they proceeded, and reached the place agreed upon where they were to meet Tungī Sukāb.

"Two months almost had now passed since my cousin Maḥmūd met with his mishap, and the wound had spread over his whole face. It was highly dangerous, on account of the severe cold, for him to remain in Zang-As-skār. Helpless, and not knowing what else to do, I sent him back to Mār-yōl, remaining in Zang-As-skār myself, intending, that, after Maḥmūd should have reached Mār-yōl safely, I would myself set out towards Sōrū and see whether the means of livelihood were attainable there or not. When Maḥmūd reached the place where the horse had kicked him, on his way to Mār-yōl, he remained there for the night; and in the morning, about the time of mounting to proceed onwards, he had unbound his head in order to apply a dressing to the wound, when the cold air affected his brain, and he became insensible. At the time of afternoon prayer a man came back to me in all haste; and I went off, and arrived at midnight, and Maḥmūd was still unconscious. \* \* \* \* He died the third day after that. \* \* \* \*

"At this time of sorrow and affliction, a man arrived, sent from the party despatched towards Sōrū, saying that Nūr 'Alī, Dīwānah, having combined with those sent with him, had seized the Maulānā, Darwēsh Muḥammad, of Qarā Tāgh, and had gone off to Bāghān, one of the Jū-iāns of one of the territories of Tibbat, whom the Maulānā, it was said, had, on some previous occasion, deceived or imposed upon, and had badly wounded the said Bāghān, and placed his life in danger.

<sup>1</sup> Possibly "Kursha" of the maps.

These tyrants had made over the Maulānā as a present to this infidel, and thereby having obtained permission of him to depart, they all went off to Yār-kand. That Tibbatī infidel killed the Maulānā by fastening up his mouth with a wooden skewer! The Sōrū affair, in consequence of this incident, had to be abandoned.

"I brought Maḥmūd's corpse to Mār-yōl, and from thence sent it on to Kāshghar to be deposited in the sepulchre of our forefathers. This affair happened in the beginning of winter, in *Scorpio*, when the cold of Tibbat is so intense, that we proceeded to Mār-yōl; and during that winter, and up to the beginning of spring, we endured such hardships and misery as cannot be expressed. When spring came round, for the sake of the horses, I set out with 70 persons, for Ūtlūq, a place to which people go, and which is noted throughout Tibbat for the nourishing powers of its grass. There I employed my time in hunting the wild ass, and the wild *yāk*, and in due course returned to Mār-yōl again. When I set out for Ūtlūq, I had left Iskandar Sulṭān at Mār-yōl in charge of the rest of the men; and now that all had assembled in one place, and the horses had become fat and strong, the men, unable any longer to endure the miseries and privations of this service, all of a sudden separated and deserted, and went off to Yār-kand. Only 50 men out of the whole of them remained with us: all the rest had fled. At this juncture, Jān Aḥmad, the Atkah, whom two years before, on the way back from the Ūrsāng expedition, I had sent to Rashīd Sulṭān with presents, as before mentioned, arrived from Yār-kand, and brought me information, which plainly showed that it would not be well or safe for me to remain in Tibbat any longer. This was the reason why I remained in it so long; for if I had left it and gone off any where else, Rashīd Sulṭān would have been sure to have laid the fault on me; but now he had broken the most solemn promises and compacts, confirmed by the most binding oaths, and they were buried in oblivion; but the breaking of his oaths lay on his own shoulders. Immediately after the arrival of Jān Aḥmad, therefore, I prepared to set out towards Badakhshān."

#### THE AUTHOR PROCEEDS INTO BADA~~KH~~SHĀN.

"I have before mentioned that out of 700 persons along with me in Tibbat only 50 now remained, the rest having fled in the best manner they were able towards Yār-kand. I have likewise mentioned the difficulties and hardships met with on the routes in Tibbat, through want of forage for horses, the lack of firewood, the excessive coldness of the air, and the difficulty of communication. All these difficulties exist to that degree that, even the mildest nature would refuse to put

up with such; and besides all these, there is the impossibility of obtaining a sufficient quantity of food and clothing, and other necessities, and particularly horse-shoes, which on such routes cannot be dispensed with. Consequently, what with the failing strength of the horses, and want of food for them, and other matters, it was found impossible to continue any longer in Tibbat. We could neither go to Kashmīr, nor Kāshghar, nor Turfān, nor Hindūstān: all were impossible of attainment as being unsafe. The only part in which there was a hope of security, and a chance of being well received, was Badakhshān. No one [among us] had seen any practicable route leading from Tibbat into Badakhshān which did not enter Kāshghar [territory?]; but among those men who had deserted with the intention of going off to Yār-kand, and had come back to us again, one, named Jahān Shāh, had, on a previous occasion, related, that he had heard from the people dwelling in the Kōhistān of Yār-kand, who were talking together on the subject, that from a place called Taghā-nāk there was a route in this way and that way, which came out into the Pā-mīr of Badakhshān.<sup>1</sup> I had at this juncture made inquiry of Jahān Shāh about this route, and we now set out to follow this road which as yet we had not seen. Of the fifty men remaining with me, as I have before mentioned, several of them, on account of want of strength to accompany us, remained in Tibbat, and with twenty-seven in all I set out. What with the lack of the necessary equipment for such a journey, and want of strength in the cattle, the difficulties of the route, and the intense cold, although the sun was in the constellation of *Virgo* [month of August], the danger was considerable; for when we reached a place called Qarā Quram ['Place of the Fallen Black Rocks']<sup>2</sup> at the time of the setting of the sun, the river there, which is of considerable size, became completely frozen over, and everywhere, where the ice was broken to obtain

<sup>1</sup> I hope it will be noted here that, even three hundred and sixty-five years ago, the Pā-mīr, or a large portion of it, belonged to, and formed part of, the territory dependent on Badakhshān. Russians will probably have the assurance to state that the Pā-mīr, or any portion of it, never belonged to Badakhshān. Another portion of it was subject to the rulers of Kāshghar.

<sup>2</sup> This does not seem to be the Pass of that name incorrectly written and "popularly" called, the "*Karakoram*" Pass, but a place much more to the west, and so called for the same reason as the other—"The Place of Fallen Black Rocks." To go from Mār-yōl to the "Qarā-Quram" Pass would have taken the Mīrzā and his party some 200 miles farther eastwards than there was any necessity for, and the retracing of his steps westwards would have added a similar distance. Besides, it is mentioned, that on the third day after Iskandar Sulṭān separated from them at the point [Taghā-nāk], where this unexplored route into Badakhshān branched off from the Yār-kand road, they in three days reached the Rās-kām *darah*. See my *Notes*, page 307.

water, not a drop was to be procured. We used our utmost endeavours to obtain some up to the time of the prayer before going to sleep, but without success. The cattle, which during the whole day had passed through a tract subject to the *dam-gīrī* malady, were thus without water on reaching their halting place, and forage for them was as scarce as silver to collect; and the little barley that was given them, they did not eat through want of water. At this juncture, Jān Aḥmad, the Atkah, said that he remembered having once seen a spring hereabouts, and that it was necessary for us to go on about half a *farsakh* (league) farther to reach it. We did so, and he pointed out a place among the ice where it should be broken. This was done, and water was found, and the cattle were watered; but there was a mule with us, one of the strongest among all the animals, which got lock-jaw for want of water, and notwithstanding all its efforts to do so, it could not drink, and died. Consequently, the necessary things with which it used to be laden had to be abandoned.

"Having reached the point where this unexplored route leading into Badakhshān branched off [from that leading to Yār-kand], Iskandar Sulṭān requested me to give him permission to leave us, saying he 'would go to Rashīd Sulṭān, and that perhaps out of brotherly feeling<sup>1</sup> and kindness, he might take pity on him, as he might now be probably satiated with the destruction he had already wrought upon his kindred.' I tried all I could to dissuade him, and assured him that no favour was to be hoped for from such an one. The difficulties and hardships of the way, and the distressed condition we were in, combined with want of resolution, and the uncertainty, tended to render him desperate, and the road of reason was veiled from his mind's eye. I nevertheless complied with his request and wishes, and despatched four men along with him. Five persons having thus separated from us out of twenty-seven, I proceeded on my way with the remaining twenty-two; but on account of their being without shoes, several of our horses broke down. The very same day that Iskandar left me, at the time of afternoon prayer, I had the good luck to kill a wild *yāk*; and we drew pieces of its hide over the hoofs of the broken down horses [in place of shoes], and carried away as much as we possibly could of its flesh. Of food, save some barley, merely sufficient for the horses for one or two days, none remained, therefore this *yāk* was quite a God-send for us. We loaded the horses with as much of its flesh as they could possibly bear—about enough for us all for four or five days—and even then three-fourths of the flesh remained, which we left as a feast for the crows and

<sup>1</sup> They were not brothers by the same mother. Rashīd Sulṭān's mother was one of Sulṭān Sa'īd Khan's other wives.

ravens of those parts, which doubtless, they banqueted upon to their hearts' content. In this way we continued to proceed by conjecture, and next day we killed another wild *yāk*, very much larger and finer than the previous one; and the following day it so happened that the Provider of Daily Bread furnished us with food in plenty.

"From the account given of this route by Jahān Shāh, I conjectured, that in six days more we might reach inhabited tracts; but on the third day after separating from Iskandar Sultān, at about breakfast time [between sun rise and noon—the early forenoon], we reached a place where several men were, some of whom, household by household, came forward to meet us with great cheerfulness and good will. We inquired of them about the route and our destination. They told us that the *darah* or valley we were then in was called Rās-kām,<sup>1</sup> and that from where we then were to the Pā-mīr was five days' journey. Having now reached the habitations of men, and such men as we here met with, we recovered from the hardships and troubles of years in the rest and ease we here obtained. The people took from us every horse whose strength had been exhausted, and exchanged with us, and replaced them with others very good and strong. Of food and drink they placed before us the best of every thing they possessed, and pressed us to partake. The men on beholding me would weep involuntarily, and in passing me would say, in their own idiom: "Thanks be to God, that of our sovereign's descendants of four hundred years, thou at least art left. We are thy sacrifice, and we dedicate ourselves to thee with our families, and people, and all we possess." At every place we reached, the whole of the people, with their families, used to accompany us, notwithstanding I forbade them to do so, and would willingly have excused them, but it was of no use, and for the space of seven days, they conducted us, with the utmost honour and kindness, and endearing expressions, to the Pā-mīr,<sup>2</sup> and they even wanted to

<sup>1</sup> The route taken by the Mīrzā led nearly due west into the Darah of Rās-kām, through which a considerable river flows, which, in about the parallel of 76° east longitude, turns towards the north, and unites with the river of Yār-kand. On the south side of this *darah* a range of high mountains separates the Rās-kām from the Kanjūt Darah, which routes are described in that part of my *Notes on Afghānistān*, etc., which has not yet seen the light; but some information respecting these parts will be found at page 315 of that work.

This route taken by Mīrzā Haidar three hundred and sixty odd years ago, is that which, in the account of "the Pevtsf Expedition," given in the "*Geographical Journal*" for July 1893, page 62, is said to be absolutely unknown! I gave an account of it, from Mīrzā Haidar's description, thirteen years before, in 1880, in my *Notes* which see.

<sup>2</sup> See Note 2, page 87.

accompany us, with all their families and belongings, into Badakhshān. At last, I managed to dismiss these kind-hearted people, and proceeded onwards into Badakhshān, to Sulimān Shāh Mirzā, who is the son of Mirzā Khān, who was my maternal aunt's son. He came forth to receive me, and did everything in his power to show me honour and respect; and I gave thanks unto God, that, after all these dangers, I had reached such a place of safety and security.

"At the time that I reached Akhāwān, which is the *sar-hadd*,<sup>1</sup> or boundary of Badakhshān<sup>2</sup> [on that side], a man in the service of Rashīd Sultān who was there on some affair, presented himself before me; and I gave him a letter in Turkī to deliver to Rashīd Sultān, on the subject of his recreant conduct and unfaithfulness. \* \* \* \* He, soon after, had the kindness to expel from his territory my wife, who was the mother's sister of Rashīd Sultān himself, and sent Iskandar Sultān before mentioned, along with her. Another great favour on Rashīd's part was, that he did not plunder her of all she was possessed of, as he had treated others of his kindred. They, in much anxiety of mind, and in very distressed circumstances, along with some others, about ten in all, arrived in Badakhshān."<sup>3</sup> \* \* \* \*

That winter was passed by Muḥammad Ḥaidar Mirzā in Badakhshān in comparative comfort, and, in the spring, in the hills and plains thereof; and in the summer he came to Kābul. There many others of the family of the late Sultān Sa'id Khān, expelled from the Kāshghar territory by Rashīd Sultān, also arrived. Subsequently Muḥammad Ḥaidar Mirzā set out for Hindūstān; and when he reached Lāhōr, Kāmran Mirzā [son of Bābar Bādshah] was then there, who received him with honour and great kindness. He says, that about this time, Sām Mirzā, son of Shāh Ismā'il, Ṣafawī, and brother of Shāh Thamāsib, the then ruler of Irān Zamīn, tried to take Qandahār from Kāmran Mirzā. This event happened in 941 H. (1538 A.D.), but, after invest-

<sup>1</sup> This word incorrectly written, "*Sarhad*," has been mistaken for the proper name of a place, and still appears in our maps as such, and also as "*Sarhad Wākhān*." The Wākhān district terminates here, as the words *Sar-hadd-i-Wākhān* mean; and this place is not more than eighteen or twenty miles from the Palpi Sang Pass.

<sup>2</sup> Because Wākhān has always been part of the Badakhshān territory.

<sup>3</sup> Mirzā Muḥammad Ḥaidar forgave 'Abdu-r-rashīd Sultān—for 'Abdu-r-rashīd is his correct or full name—for his ill-treatment of himself and friends, as he had been led to commit most of his misdeeds by one of his Amīrs, Muḥammadi by name, of the Burlās tribe of Mughals, whom he subsequently rid himself of, and repented of his misdeeds. When Mirzā Muḥammad Ḥaidar wrote his work in 953 H. (1546 A.D.), he named it after 'Abdu-r-rashīd Sultān and styled it "*Tārīkh-i-Rashīd*."

ing it for eight months, Kāmūrān Mirzā arrived with an army from Lāhōr, defeated Sām Mirzā, and relieved the place.

I propose shortly to give the other valuable geographical details contained in Mirzā Muḥammad Ḥaidar's work, respecting Turkistān and Muḡhalistān, and other matters. In case any one hereafter should avail himself of any of the information contained in this paper, it is to be hoped that it will be acknowledged.

The following brief account of the western part of Tibbat is from the observations of the Mir, 'Abdu-l-karīm, son of Mir Ismā'il, of Bukhārā, who was there in 1224 H. (1809 A.D.). He had gone the preceding year, in company with the Mirzā, Muḥammad Yūsuf, from Bukhārā, on a mission to Constantinople by way of Moscow. From his account we can gain some idea of the state of western Tibbat about the same time that the Hon'ble Mount-Stuart Elphinstone was at Peshāwar on his mission to Shāh Shuja'u-l-mulk, the Sadōzī ruler of the Afghān State. 'Abdu-l-karīm states, that:—

"There are seven Tibbats, three of which are subject to Kash-mīr, and the other four are independent, and have a Rājā, that is to say, a Ruler, of their own. The most of the people of the Tibbats are followers of the faith of the Qalmāq [Qal-l-māq], Mānī, and some are Majūs [Magians]. Corn and provisions are scarce, and many of the people are very poor. Barley meal and flour of millet are obtainable. They give a daughter to ten husbands; and, if any one should take one of the people away and make a Musalmān of him, there is no hindrance. One Tibbat—Tibbat-i-Kalān [or Great Tibbat]—is parallel with Kash-mīr for fifteen stages. When a party of merchants make a purchase of *shāl's*, they make up three or five parcels or packages into a bale or bundle, and as many bundles as there may be, they make over to the charge of Kash-mīrī porters hired for the purpose, who convey them on their shoulders, and reach Tibbat in fifteen days. As the route is difficult and mountainous, horses and mules cannot pass that way, and porters are hired upon all occasions. If a merchant so desires, he hires two men, who have small pads fastened to their shoulders; and he mounts the shoulders of one of them. The man takes hold of one foot of the merchant on one side, in front, and the other foot is towards the porter's back; and in this manner he goes along with ease and comfort. The other porter takes his turn to relieve the first, and in this manner they proceed on their way. \* \* \* \* Horses can go into Great Tibbat, and merchants avail themselves of them, and ride horses in going by that route.

"When a *Kārwan* (rul. "caravan") proceeds from Tibbat towards Yār-kand, which is a territory belonging to Khitāe, they leave to pro-

ceed a distance of forty stages, through a part where there are neither inhabitants nor cultivation, and where neither firewood nor forage is procurable: only water can be obtained. It is a *kōhistān* (mountainous tract) black and arid, but one thing may be said in its favour, and that is, that highway robbers are not found in that part. People proceeding from Tibbat to Yār-kand, and *vice versâ*, take provisions for forty days along with them, such as bread, clarified butter, and flesh. In that mountainous solitude there are black crows, so that whenever a horse, through fatigue, lies down and falls asleep, these crows come upon the animal and peck out its eyes. There are also wolves, that, if they chance to find a man alone, they will attack and rend him. These crows, too, if they perceive a man through fatigue lying down, several of them collect about him and blind him, and after that devour him. The route is very rough and difficult, and besides this, an exhalation arises from the ground like unto the *samūm* [*vul.* "simoon"]. If a person should venture to move along somewhat quickly, this noxious vapour or exhalation, reaches his brain, and he becomes affected after the manner of people on board ship with sea-sickness. At times people die from its effects. Some apply garlic to the head, some smell it, sometimes lime-juice is taken, and the person affected recovers; but a great number of horses perish of that *samūm*.<sup>1</sup>

"At times it so happens, that a merchant has ten loads of goods, and takes with him twenty horses by way of precaution, to convey the goods, and barley, bread, and other necessary stores. By chance, the whole of his horses perish on the road [from this malady?]. The merchant then places his loads piled one over the other, in an open place, and covers them with mats or felts, and marks the place with a heap of stones. If the merchant is going from Tibbat to Yār-kand when such an accident befalls him, he comes on, with the persons along with him, to Yār-kand, purchases fresh horses, and goes back and fetches his property. If, on the other hand, he is going from Yār-kand to Tibbat when he has the misfortune to lose his horses, he considers which place is the nearest to him, and he proceeds thither, and brings on horses to carry the loads. If he should remain away for years, his goods sustain neither loss nor injury.

"In that mountainous part, there are cattle which they style *qūṭās* (*yāḱ*), the tail of which is bushy like that of the fox, but very long, which they fasten to the head of their *tūghs*<sup>2</sup> or standards, which

<sup>1</sup> This, of course, is *dam-girī* already described by Mīrzā Ḥaidar.

<sup>2</sup> The greater the number of *yāḱ* tails appended to the *tūgh* or standard, the greater the rank of the leader to whom it belonged. Thus we read in the old writers, in the wars between the Christians and the 'Uṣmānī Turks, about Pashās of so many



hang down like the hair of women. There are a number of these animals met with on this route; and in Tibbat they are domesticated in great numbers, and draw loads like as do buffaloes. The flesh and milk of these animals are very delicious. The writer of this, the humble Mir 'Abdu-l-karīm, Bukhārī, proceeded twice into Kash-mīr; once, when in his sixteenth year, from Hirāt, by Qandahār, Kābul, Peshāwar, and Muẓaffar-ābād, and returned by this very route through Tibbat. On the other occasion, he proceeded from the territory of Bukhārā [and] from Simī-pūlād [Semipolatsinsk], which is the termination of the Masqō<sup>1</sup> [Moscow—Russian] territory in that direction, and by Īlah, Āq-sū, Kāshghar, Yār-kand, and Tibbat, to Kash-mīr, in 1224 H. (1809 A.D.), and returned from thence by the same route. On the way through Tibbat a calf of the *qūṭās* was found asleep, and I killed it with a pistol; and the flesh was delicious. Those who go into Tibbat to purchase the *tibbat*, that is the *pashm* [wool] of the goats, which *pashm* is used in the manufacture of *shāl*s in Kash-mīr, bring back zedoary (*curcuma zedoaria*) from thence along with them.

“The particulars respecting Tibbat are, that it is a very mountainous tract of country, lying between the countries of *Khītā* and Hindūstān. It is very long in extent from west to east, but much less in breadth, while its elevation is so great that its mountains throw their heads to the sky, and its routes are as hard as the hearts of misers. It is three months' journey [from the part of Tibbat referred to] to what they

tails; not that the *Pashās* were furnished with caudal appendages themselves, but their *tūghs* or standards.

In Rajab, 602 H., February, 1206 A.D., when the title of the Cingiz, or Great *Khān* was assigned to Timur-cī, at the *quriltāe*, or general assembly, held on that occasion, he set up a white *tūgh* or standard, consisting of nine degrees, or tails, indicated by as many tails of the *ghajz* gau or *bos grunniens*; and he was seated on a high throne with a diadem on his head. Nine is the particularly venerated number among the *Mughals*, that being the number of the first nine chiefs of their *ī-māq* before the general massacre of the *Mughal* people by the Tattār *ī-māq*. See *Tubaqāt-i-Nāṣirī*, page 881.

<sup>1</sup> The author in mentioning Rusiāh and Rusiān (Russians) says, in one place in his work, respecting the distance intervening between their territory and Ūrganj and Bukhārā at that time—just eighty-five years ago—that, “the difficulties by the way, the scarcity of water, firewood, and provisions, and the cold and snow of winter, and excessive heat of summer, are such, that the Rusiān, in consequence, have no desire or inclination in that direction [in which he, like many others, was much mistaken], the Almighty God, having, of His Mercy, placed thereby between the people of Islām and the Yājūj-like Rusiān [referring to Yājūj Mājūj—Gog and Magog], an Alexandrian barrier, otherwise those parts possessed neither the power nor the energy to withstand the armies of those infidels.”

At the period in question the Russians were otherwise engaged.

call Lāmbah [Lhasā ?], where is the temple or place of worship of the people of Qalmāq [Qal-Ī-māq], and an assemblage of Brahmāus [! Buddhists he must mean]. Some relate that the *ṭābūt* [bier or coffin] of Mānī, the Naqqāsh,<sup>1</sup> is preserved there. This territory of Lāmbah is in the possession of the Bādshāh of Khitā; and in it dwell people who are nomads, and live in *khargāhs* [felt tents] in the open country and uncultivated tracts, who possess a vast number of sheep and goats. Their goats are of large size, and their *pashm* abundant, like unto the sheep of this country [the country where he wrote]. In the month of *tīr* [June], the shepherds dig up *zedoary* from the ground in the mountains and wilds; and rhubarb, and *māmīrān* [a root yielding a yellow dye] are also brought from that part. There is a class of people, who having clubbed together, go out into the different mountain districts of this territory with their sheep, and from every here and there buy up the *tibbat* or *pashm* of the goats, from half a *ḥuqqah* (a fardel or parcel) to ten *ḥuqqahs*, and purchase the male goats also that the natives have to sell. Having put the *pashm* into saddle-bags, they fasten them on to their sheep; and in this way, in the course of two months, collecting *pashm* from different places, they manage to load a thousand sheep or more."

<sup>1</sup> The name of a celebrated painter who lived in the time of Ārd-shīr, but some say, and more correctly so, in the time of Bahrām Shāh, ruler of Irān Zamīn, and who appeared in the world after the time of our Saviour upon earth, and gave himself out to be an apostle, upon which Hurmūz Shāh, son of Bahrām, put him to death.

Another account is, that Mānī appeared in the world in the middle of the third century, and gave out that he was the paraclete or comforter promised by our Lord Jesus Christ, and soon founded a numerous sect. The ruler of Irān Zamīn ordered him to be seized, upon which he fled into the country of the Turks (which includes Mughals and Tattārs). His religion was a mixture of Magian, Hindū, and Christian tenets; and among his followers were even Christian patriarchs and bishops. His sect were, from his name, known in Europe as Manicheans.

# ON THE TRANSLITERATION OF MALAY

## IN THE ROMAN CHARACTER.

BY

W. E. MAXWELL.

—:0:—



SOME years ago, in compliance with the directions of the Secretary of State for the Colonies, a system was adopted by the Government of the Straits Settlements for the spelling of native names, in which a want of conformity was complained of. It is convenient and desirable that there should be some standard for the spelling of names which may appear in official correspondence, which may be printed in Blue-books, and quoted in Parliament. But a system may satisfactorily secure *uniformity* which may nevertheless be wanting on the score of scholarship, and, unless sound in the latter respect, it will not answer the purposes of the philologist or geographer.

The adoption of the Government system by the Council of the Straits Branch, Royal Asiatic Society, as that which members are invited to adopt,\* lays it open to their criticism. It may be questioned if it is satisfactory from a scientific point of view, or in accordance with principles of true scholarship. Two distinct subjects—transliteration and pronunciation—are confused, and the report which deals with them does not sufficiently distinguish between instructions how to spell and instructions how to pronounce.

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\* "Malay and English Spelling," Journal of the Straits Branch of the Royal Asiatic Society, Vol. I. p. 45.

The subject is a difficult one. MARSDEN, CRAWFURD and LOGAN have failed to find a satisfactory settlement of it, but I do not think that the last word on it has yet been said. The following remarks on the transliteration and pronunciation of Malay words are offered to the Society with the view of drawing the attention of the Council to the advisability of the adoption for literary and scientific purposes of some better system of rendering Malay words in Roman letters than that hitherto recommended.

### GENERAL PRINCIPLES.

There are two objects to be kept in view in deciding upon a system by which to render Malay in Roman characters:—

- 1st. To obtain a faithful transliteration of the Malay character.
- 2nd. To clothe the words in such a form that they may be pronounced correctly by an English reader.

The first regards letters before sounds, the second regards sounds before letters.

Either of these objects may be attained separately, but to combine both without perplexing the reader is more difficult of accomplishment. If the reproduction in some form or other of native letters (for some of which the English alphabet has no equivalent) is too exclusively attended to, the result may sometimes be a word which is difficult of pronunciation to the uninitiated. CRAWFURD claims the advantage of simplicity for his system, yet few persons probably would recognise in *S'ex*\* the common Arabic word *Sheikh*. On the other hand, if the system be purely phonetic, the ear must be entirely depended on; sounds which nearly approach each other will be mistaken one for another, and persons professing to use the same system will very likely spell words differently.

Another important point must be borne in mind. Malay contains a large number of pure Sanskrit and Arabic words; it is necessary, therefore, to avoid any serious departure from the principles sanctioned by European scholarship of transliterating those languages. Any system of spelling Malay would be discredited

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\* CRAWFURD'S Dictionary.

which should present common Sanskrit and Arabic words in uncouth forms hardly recognisable to students of those languages.

It is submitted, therefore, that in a really sound system of Romanised Malay,—(1) the native spelling must be followed as far as possible; (2) educated native pronunciation must be followed in supplying vowels which are left unwritten in the native character; (3) native pronunciation may be disregarded where the written version is not inconsistent with the true pronunciation of a Sanskrit or Arabic word.

Examples :—

1. ماري *Mari*, come. (Here the four letters *m*, *a*, *r* and *i* exactly transliterate the four native letters).

2. تمڤڠ *Tampang*, a coin.  
*Tampong*, a patch.  
*Tempung*, a game.  
*Tempang*, lame.  
*Tumpang*, to lodge.

These five words are spelt in the same way in the native character, in which only the consonants, *t m p n g*, are written. Regard must, therefore, be had to pronunciation in assigning the proper vowels to them when rendered in Roman letters.

3. منترى *Mantri*, a minister. This word is pronounced by Malays *M'ntri*, as if there were no definite vowel between the *m* and *n*, but its Sanskrit origin shews clearly that *a* is the vowel which ought to be supplied.

ڤترا ; ڤتري *Putra*, a prince, *Putri*, a princess; in these words, too, the vowel-sound in the penultimate is indefinite, but the vowel *u* is properly supplied, both being common Sanskrit words; to write them *petra* and *petri* would be to disguise their origin.

#### VOWELS.

The difficulty of arriving at a satisfactory system of transliteration of Malay is caused partly by the insufficiency of the Arabic vowels to render the Malay vowel-sounds.

The vowels borrowed from the Arabic are four:—

- ا *Alif*, ā, as the *a* in *father*. باقى *bāniak*, many, much, very;

لام *lāma* length of time.

و *Wau*, ō, ū, as the *o* in *nose* and the *u* in *truth*. تولی *tōlak*, to push; كون *gūna*, quality, use.

ي *Ya*, ē, ī, as the *ē* in *fête* and the double *e* in *thee*. بيد *bēda*, difference; بيني *binī*, wife.

ع *Ain*, 'a, 'e, 'i, 'u. This vowel conveys a deep and somewhat nasal sound which must be heard to be understood; examples: عمر *'umur*, life, age; عقل *'akal*, mind, intelligence; علم *'ilmu*, science.

These are always long. A short vowel is not written. In Arabic indeed it may be denoted by what are called vowel-points placed above and below the consonants, but vowel-points have been generally adopted in Malay, and the short vowels are left to be supplied by the reader like vowels in our ordinary short-hand.

To shew how completely the use and the accentuation of the vowels in Arabic differ from Malay, to which language nevertheless the Arabic alphabet (with some additions) has been applied, it is only necessary to examine a passage of Arabic transliterated in the Roman character, *e. g.*, an extract from the Kur'an or from any other book, or to hear it correctly read.

The majority of the words, it will be found, end in open vowels, and in pronunciation the long vowels are strongly accentuated. A short *e* is of rare occurrence.

Take a sentence of equal length in Malay; it will be remarked that most of the words end in consonants, the exceptions being generally words of Sanskrit or other foreign origin, in many words the nominally short vowels, namely those not written, will have equal value in pronunciation with those which are written, and a sound which corresponds closely with the short *e* in the English words *belong*, *benefit* is abundant.

In writing Malay, therefore, the Arabic alphabet has to express sounds very different from those of the language to which it belongs.

The short *e* in Malay is often "a distinct and peculiar sound, which has a separate character to represent it in the Javanese alphabet,"\* but for which there is no particular sign in the Perso-

\* CRAWFORD, Malay Grammar, p. 4.

Arabic alphabet used by the Malays.

This sound can only be expressed in Arabic writing by the vowel-point called *fathah* (Malay, *baris di-atas*); it is a dash placed over the consonant to which the vowel belongs. The particles *ber-*, *ter-* would be written بَرَّ، تَرَّ.

(The *fathah*, however, denotes a short *a* as well as a short *e* as *kapada* كَفَدَا).

In the words *sembah*, salutation, homage, *bendang*, a rice-field, *senduk*, a spoon, the first syllables are not pronounced like the English words *gem*, *men*. An indefinite sound is given to the syllables mentioned, as if it were attempted to pronounce the two consonants without an intervening vowel, *s'mbah*, *b'ndang*, *s'nduk*.

Some English scholars seeking a satisfactory mode of rendering Malay in Roman letters have attempted to do what the Malays have not thought it necessary to do for themselves, namely to denote this peculiar vowel-sound by a particular sign. CRAWFORD professed to distinguish it by *é*; KEASBERRY wrote *ä*; there is perhaps good reason for this in works intended for the use of students beginning the study of the language, vocabularies, grammars and the like. But the authors of the Government spelling-system, who selected *ẽ* to express the sound in question, might have spared themselves this additional vowel-symbol.

As we have seen above, this sound can only be expressed in writing by Malays by the *fathah*, short *a* or short *e*. Why not be satisfied with *a* or *e* to express it in English? This is quite sufficient for purposes of transliteration, and scientific men do not want to burden their text with accents to denote sounds not expressed in the native text. We do not distinguish by a different sign each of the numerous ways of pronouncing *e* in the English or French language.

Once quit the safe ground of transliteration and trust to that uncertain guide—the ear—and all chance of uniformity is at an end. Let us see how the systems mentioned above have worked in practice. Take, for instance, the short syllable *sa*, which is frequently found as the *first* syllable of Malay words. The authorities who have been quoted are not agreed when to give the syllable the

force of the vowel *a* and when to introduce their signs for the peculiar vowel-sound which they want to represent.

KEASBERRY writes *samo*a and *sakarang*, but *sūblah*, *sūdik*it and *sūbab*.

CRAWFURD writes *sabenar*, *sūbāb*, *sadik*it and *sūdik*it, *sakarang* and *sākarang*, *sambilan* and *sāmbilan*; one word is spelt in four different ways, *sāpārti*, *sapārti*, *sapurti* and *sāpurti*; he introduces the vowel in a curious manner in the Sanskrit words *srigala*, which he spells *sārigala*, and *sloka*, which he spells *sāloka*. The short vowels in the Sanskrit word *sābda* and the Arabic word *sābtū* are represented in different ways.

The Spelling Committee of the Straits Settlements write *Selangor*, *Sarawak* and *sembilan*, though it is not clear why *sa* is allowed to stand in *Sarawak* while *Salangor* is held to be wrong. The adoption of the syllable *se* in *sembilan* (nine) is still more singular, for the vowel is clearly *a*, *sambilan* being derived from *sa-ambil-an*, "one taken away (from ten)." In most instances this initial syllable is derived from the Sanskrit *sa* or *sam* (with) and it cannot be right to render it by *se* or *sē*, which do not more nearly approach the Malay pronunciation than *sa*.

Many other instances might be given. I have seen in Government publications the name of the Malay State "Patani," spelt "Pētani." Yet it can hardly be said that there is good reason for departing from the established mode of spelling this word (which has been spelt "Patani" from the days of JAMES I.), when it is remembered that the Malay historical work called *Sajarah Malayu* says that the state was called after a fisherman who had a son called *Tani* and was therefore called Pa-Tani (Tani's father). However absurd this derivation may be, its occurrence in a purely native work is at all events conclusive as to the pronunciation of the first syllable.

## SYSTEM PROPOSED.

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### VOWELS.

The only use of the accents which will be inserted is to denote that the vowel is expressed in the Malay text. No sign will be used



to denote the accentuation of any particular syllable; transliteration, not pronunciation, is the first object to be kept in view. For general purposes, the accents may be omitted at option. It cannot matter whether مات, the eye, is rendered *māta* or *mata*. Thus:—

*ā* corresponds with ا written in Malay, as فافن *pāpan*.

*a* and *e* correspond with *fathah* where the vowel is omitted, as فافن *panjang*, برچري *ber-cheri*.

*ī* and *é* correspond with ي written in Malay, as ييني *bīnī*, كچق *kéhek*.

*i* and *e* correspond with *kesrah* where the vowel is omitted, as دندغ *dinding*, ظاهر *zahir*, فافن *pātek*.

*ū* and *ó* correspond with و written in Malay, as بوت *būta*, بوغ *bôhong*.

*u* and *o* correspond with *dammah* where the vowel is omitted, as تفت *tuntut*, ففدق *pondok*.

The Greek rough breathing before a vowel denotes the presence of ع *ain* in the native writing, as عقل *‘akal*, عمر *‘umur*, معلوم *ma‘alum*.

#### DIPHTHONGS.

*ai* corresponds with ا and ي when followed by a consonant, as بائق *baik*, ناك *naik*.

*au* corresponds with و, as فولو *pulau*.

*ei* corresponds with ي, as سوفي *sungei*.

#### Y and W.

Y should be written for ي when it precedes or is preceded by a long vowel, as سايف *sâyang*; لاي *layar*; بايف *bayang*; مويف *moyang*; بويف *buyong*. Exception, ي should never be rendered by *iy* for this gives two letters to one Malay character where one letter is sufficient; سياغ *siang*, not *siyang*; سيوغ *siong* not *siyong*.

W should be written for و when it precedes or is preceded by a long vowel, as باوا *barwa*; كاوان *kawan*; لاواك *lawak*.

Exception:—

و should never be rendered by *uw*, for this gives two letters to

one Malay character and one sufficiently expresses the sound : بوات *buat*, not *bawat* ; كوالا *kuala*, not *kuwala* ; توان *tuan*, not *tuwan*.

### LIQUIDS.

The combination of two consonants the latter of which is a liquid, which is so common in Aryan languages, is not to be found in indigenous Malay words. Where it apparently occurs its presence is caused by the elision of the vowel in one of the Polynesian prefixes *ber*, *ter*, *ka*, *sa*, and *pe*.

There are, of course, plenty of Sanskrit words in Malay in which the junction of two consonants, one being a liquid, occurs, such as *satru*, *indra*, *sri*, *mantri*, but I believe that no instance of two consonants sounded together can be pointed out in Malay which cannot be accounted for either by foreign derivation or elision of the vowel of a particle.

Malay is an agglutinative language, and many of its dissyllabic radicals have been developed from monosyllables by the prefix of particles. Their origin has been forgotten and by the gradual growth of the language they may be now lengthened into words of three, four and five syllables by the addition of prefixes and affixes, each change giving fresh development to the simple idea embodied in the radical.

To analyse the origin of indigenous Malay words and to get some idea of their derivation, and of the connection between many which present distinct forms and get obvious similarity, it is necessary to identify the agglutinative particles and to distinguish them from the root. Where the syllables are distinct this is easy ; in the words *mekik*, to cry out, to hoot ; *pekik*, to squeal or scream as a woman ; *berkik*, the snipe, literally, the squeaker,—the common root *kik*, and the agglutinative particles, *me*, *pe*, and *ber*, are easily distinguished.

But where the first letter of the root or radical is a liquid, there is a tendency in pronunciation to blend with it the first letter of the particle. Nevertheless, it is quite clear that in spelling such words as *pelandok*, the mouse-deer ; *pelantak*, a ramrod ; *peluru*, a

bullet,—the full value of the particle should be shewn, and that *plantak*, *plandok* and *pluru* are incorrect and unscholarly.

*Pe* is the sign of a verbal noun. I do not know of any Malay verb *landok*, but that the name of the mouse-deer is derived from a word having something to do with rapidity of motion is sufficiently shewn by the meanings of other words having the same root :—

*Lanchit* and *lonchat*, to jump, spring.

*Lanchar*, quick, direct, fluent.

*Lanchur*, to flow, spurt out.

*Lanjut*, long, stretching forward.

*Lantak*, to strike home, transfix.

*Lanting*, to fling.

*Langsong*, to proceed direct, &c.

On the same principle, it is not incorrect to shew, by the insertion of the vowel before the liquid, the existence of the forgotten particle in the first syllable of such words as, *bri* (*be-ri*), give; *blanja* (*bel-anja*), expend; *blanga* (*bel-anga*), a cooking pot; *trang* (*te-rang*), cleared; *trima* (*te-rima*), receive; *trus* (*te-rus*), through.\*

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\* One advantage of inserting the vowel is that the separation of the particle from the root renders apparent etymological features which might otherwise be unsuspected. Thus, in the examples given above, the same root may perhaps be detached in the Malay words for “give” and “receive.”

So the common derivation of *belanga* and other words having to do with heat or burning becomes apparent :—

*Bel-anga*, a cooking pot.

*Hangat*, hot.

*Hangus*, burnt, scorched.

*Hangit*, smell of something burning.

The meaning of *ran* or *rang* appears to be “to cut;” it occurs in such words as, *rantas*, to cut a passage through jungle; *ranchong*, to whittle to a point, &c.; *terang*, or *trang*, is “cleared,” “cut away,” and therefore “clear,” “plain;” *pa-rang*, is “the cutter,” the chopper or jungle-knife used in agriculture.

Us, the root of *terus* or *trus*, seems to convey the idea of admission or penetration :—

*Terus*, through.

*Chelus*, admissible.

*Lulus*, admissible, permissible.

*Tumbus*, pierced, perforated.

*Halus*, fine, slender.

*Kurus*, thin, &c.

## CONSONANTS.

The following are the consonants used in writing Malay with the equivalents by which I propose to represent them in Roman letters:—

ب	bâ	...	...	b
ت	tâ	...	...	t
ث	sâ	...	...	s * in Arabic <i>th</i> , pronounced as in <i>thin</i> .
ج	jîm	...	...	j
چ	châ	...	...	ch
ح	hâ	...	...	h
خ	khâ	...	...	kh †
د	dâl	...	...	d
ذ	dhâl	...	...	dh pronounced in Arabic like <i>th</i> in <i>this</i> .
ر	râ	...	...	r
ز	zay	...	...	z
س	sin, sim	...	...	s
ش	shin, shim	...	...	sh
ص	sâd	...	...	s ‡
ض	ḍâd	...	...	ḍ    (in pronouncing this letter the tongue touches the back of the upper front teeth).
ط	tâ	...	...	t
ظ	za, zoi	...	...	z **
غ	ghrain	...	...	ghr ††

\* Only two words are in common use in Malay which commence with this letter, namely the names of the second and third days of the week.

† خ is a strong guttural. It resembles the sound of *ch*, in the Scotch word *loch*.

‡ ص is a strongly articulated palatal *s*, somewhat like *ss* in *hiss*.

|| ض the true sound of this letter must be learnt by the ear. It is like a strong *d*.

\*\* ظ the power of this letter is that of *z*, pronounced with a hollow sound from the throat.

†† غ is a hard guttural *g*. It somewhat resembles the sound of the Northumbrian *r*.

غ	ngâ	...	...	ng
ف	fâ	...	...	f
پ	pâ	...	...	p
ق	kâf	...	...	k *
ك	kaf	...	...	k
ك or گ	gâ	...	...	g hard.
ل	lam	...	...	l
م	mim	...	...	m
ن	nun	...	...	n
و	wau	...	...	w
ه, ه, ه	hâ	...	...	h
ي	yâ	...	...	y
پ	nia	...	...	ni, ny, nia, nya

Some of the foregoing letters represent sounds which do not belong to the native Malay language, but which are found only in words taken from Arabic. Uneducated Malays make little attempt to pronounce them, but every boy who learns to read the Kur'an has to do so and the present tendency of the language is to borrow more and more from the Arabs.

*f* is almost always turned by Malays into a *p*; e. g., *pikir* for *jikir*.

*k* and *ķ* are generally pronounced alike by Malays and *kh* is not always distinguished from them.

ث, س, ص are all pronounced alike, as *s*, by the Malays.

In the same way little or no distinction is made in pronunciation between *t* and *ṭ*. The letters denoted by *ḍ* and *ẓ* are generally mispronounced by Malays, who sometimes render them by *l* and sometimes, as do Muhammadans in Persia and India, by *z*.

#### SPELLING OF ARABIC WORDS.

Certain rules remain to be noticed which should be observed in transliterating Arabic words in Malay literature.

*Al (el-)* is assimilated before the solar letters, which are:—

ا, ب, ت, ث, ج, د, ذ, ر, ز, س, ش, ص, ض, ط, ظ, ع, ف, ق, ك, ل, م, ن, ه, و, ي.

\* ق is a guttural *k*. This and the five preceding notes are taken from Faris-El-Shidiac's Arabic Grammar.

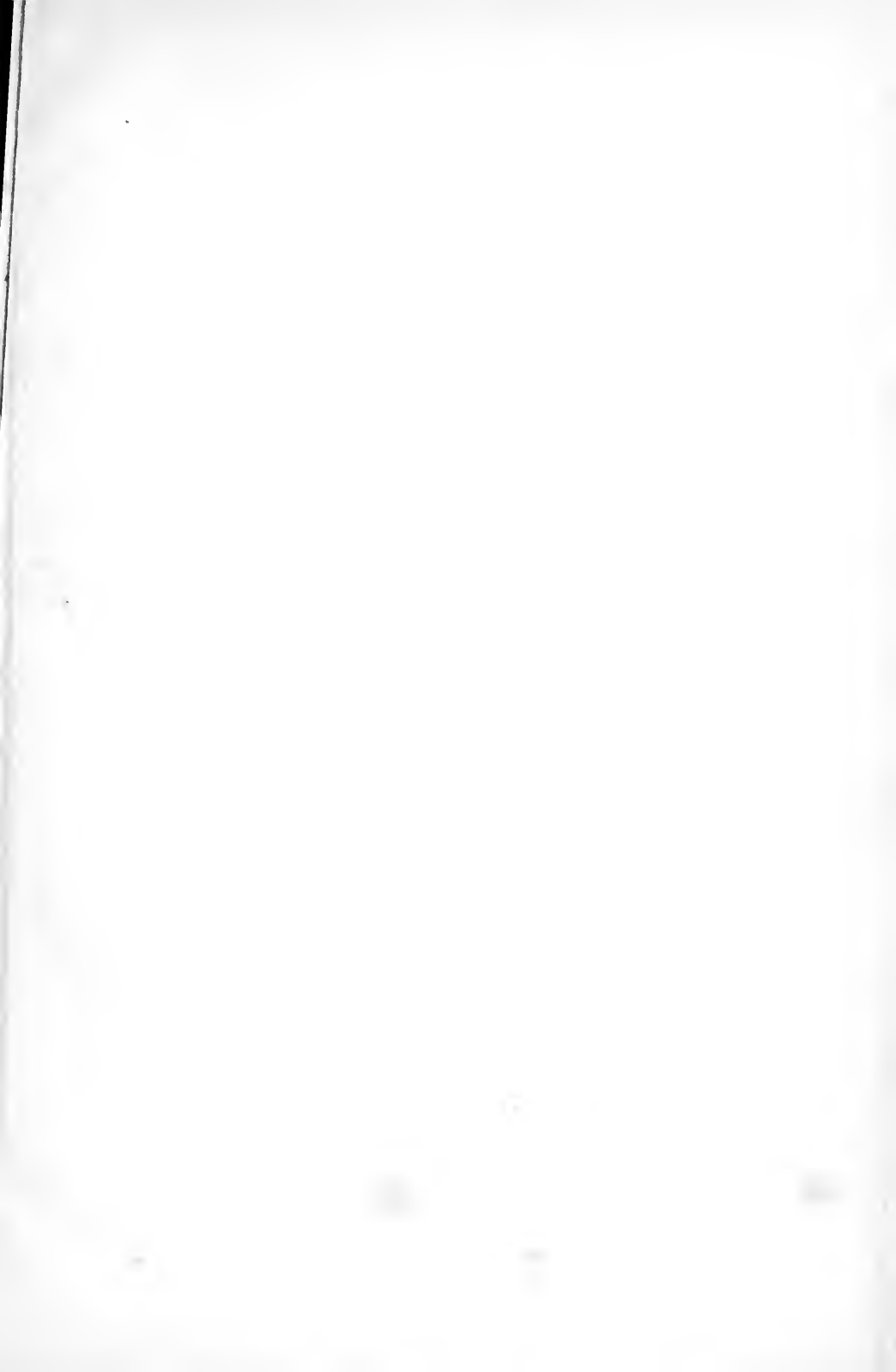
The other letters are called the lunar letters and do not assimilate the *ج*, namely :—

ي, and ة, و, م, ك, ق, ف, غ, ع, خ, ح, ج, ب, ا.

Examples : -*r.rah-māni-r-rahim*, the merciful, the compassionate ; *māliki yaumi-ḥ-ḥ*, the Lord of the Day of Judgment ; *aleyhi-s-salam*, on him be peace. Proper names : *Abdurrahman Dia-uddin*.

The force of the orthographical sign called *teshdid* may be rendered by doubling the consonants over which it is placed as *tammāt*, finished ; *jannāt*, Paradise (lit. "the garden"), *Muhammad*, Mohamed ; *Sayyid*, a descendant of the Prophet.









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